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# NAVAL POSTGRADUATE SCHOOL
## Monterey, California

# THESIS

AN ANALYSIS OF THE ADVICE CODES
AND PRIORITIES PLACED ON
2Z COGNIZANCE REQUISITIONS

by

Robert R. Bird

and

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December 1984

Thesis Advisor: A. W. McMasters

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This thesis evaluates the priority and advice code placed on 2Z cog material requisitions in an attempt to determine the magnitude of the impact the lack of spares for 2Z cog material can have on fleet support and the mission capability of fleet units. As the inventory manager for 2Z cog material, NAVELEX's investment in sufficient spares for principal items is constrained by the NAVCOMPT budget policy. This policy severely restricts the number of spares that can be procured

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# An Analysis of the Advice Codes and Priorities Placed on 2Z Cognizance Requisitions

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MASTER OF SCIENCE IN MANAGEMENT

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## LIST OF ABBREVIATIONS

| | |
|---|---|
| AFS | COMBAT STORES SHIP |
| ANMCS | ANTICIPATED NOT MISSION CAPABLE - SUPPLY |
| ASO | AVIATION SUPPLY OFFICE |
| BESEP | BASIC ELECTRONIC SHORE EQUIPMENT |
| CASREPT | CASUALTY REPORT |
| CENILE | CUMULATIVE END ITEM LEDGER |
| CNO | CHIEF OF NAVAL OPERATIONS |
| COG | COGNIZANCE SYMBOL |
| DLR | DEPOT LEVEL REPAIRABLE |
| DOP | DESIGNATED OVERHAUL POINT |
| EDICT | EQUIPMENT DICTIONARY |
| EIC | EQUIPMENT IDENTIFICATION CODE |
| F/AD | FORCE/ACTIVITY DESIGNATOR |
| FILL | FLEET ISSUE LOAD LIST |
| FIRL | FLEET ISSUE REQUIREMENTS LIST |
| FMP | FLEET MODERNIZATION PROGRAM |
| FMS | FOREIGN MILITARY SALES |
| FSC | FEDERAL SUPPLY CLASS |
| HSC | HARDWARE SYSTEM COMMAND |
| ICP | INVENTORY CONTROL POINT |
| LOR | LEVEL OF REPAIR |
| MDF | MASTER DATA FILE |
| MIPR | MILITARY INTERDEPARTMENTAL PURCHASE REQUEST |

| | |
|---|---|
| MLSF | MOBILE LOGISTICS SUPPORT FORCE |
| MTR | MANDATORY TURN-IN REPAIRABLE |
| NARF | NAVAL AIR REWORK FACILITY |
| NAVAIR | NAVAL AIR SYSTEMS COMMAND |
| NAVCOMPT | COMPTROLLER OF THE NAVY |
| NAVELEX | NAVAL ELECTRONIC SYSTEMS COMMAND |
| NAVFAC | NAVAL FACILITIES ENGINEERING COMMAND |
| NAVMAT | CHIEF OF NAVAL MATERIAL |
| NAVSEA | NAVAL SEA SYSTEMS COMMAND |
| NAVSUP | NAVAL SUPPLY SYSTEMS COMMAND |
| NAVTELCOM | NAVAL TELECOMMUNICATIONS COMMAND |
| NIIN | NATIONAL ITEM IDENTIFICATION NUMBER |
| NMCS | NOT MISSION CAPABLE - SUPPLY |
| NORS | NOT OPERATIONALLY READY - SUPPLY |
| NRFI | NOT READY FOR ISSUE |
| NSF | NAVY STOCK FUND |
| NSC | NAVY SUPPLY CENTER |
| NSN | NATIONAL STOCK NUMBER |
| O&MN | OPERATIONS AND MAINTENANCE, NAVY |
| OPN | OTHER PROCUREMENT, NAVY |
| PD | PRIORITY DESIGNATOR |
| PICA | PRIMARY INVENTORY CONTROL ACTIVITY |
| PMCS | PARTIAL MISSION CAPABLE - SUPPLY |
| PPR | PLANNED PROGRAM REQUIREMENT |
| RACC/ATS | REQUIREMENTS ACCUMULATOR/ACQUISITION TRACKING SYSTEM |

| | |
|---|---|
| RADIAC | RADIOACTIVITY, DETECTION, INDICATION, AND COMPUTATION |
| SAMIS | SHIP ALTERATION MANAGEMENT INFORMATION SYSTEM |
| SCN | SHIPBUILDING AND CONVERSION, NAVY |
| SICA | SECONDARY INVENTORY CONTROL ACTIVITY |
| SM&R | SOURCE, MAINTENANCE AND RECOVERABILITY CODE |
| SPCC | SHIPS PARTS CONTROL CENTER |
| SPD | SHIPS PROGRAM DIRECTIVE |
| SYSCOM | SYSTEM COMMAND |
| TARSLL | TENDER AND REPAIR SHIP LOAD LIST |
| TIR | TRANSACTION ITEM REPORT |
| UIC | UNIT IDENTIFICATION CODE |
| UICP | UNIFORM INVENTORY CONTROL POINT |
| UMMIPS | UNIFORM MATERIAL MOVEMENT AND ISSUE PRIORITY SYSTEM |
| UND | URGENCY OF NEED DESIGNATOR |

# I. INTRODUCTION

## A. BACKGROUND

The management of material by Hardware Systems Commands (HSCs) has been and continues to be an area of concern. Specifically, the management function of 2Z cognizance (cog) material performed by Naval Electronic Systems Command (NAVELEX) has been examined in several theses. In 1976 McCarthy, et. al. [1] raised the issue of potential 2Z cog material fleet support problems as a result of the Navy's policy of prohibiting the funding of unplanned requirements for principal end items. The objective at that time was to provide NAVELEX with a means to substantiate funding support for these unplanned requirements. Hanson [2] discussed NAVELEX's inability to obtain funding for the procurement of spares to replace those identified as non-repairable in the repair cycle. As a consequence, Hanson suggested that NAVELEX not retain the management responsibility for these items. Rather, as many of those items as possible should be managed by the Ships Parts Control Center (SPCC) Inventory Control Point (ICP) of the Naval Supply Systems Command (NAVSUP) from their initial support date following initial provisioning. Only those items identified as unstable in design would continue to be managed by NAVELEX. In 1979 Lynn [3] also addressed the

funding shortfall experienced by NAVELEX and identified that it was due to the conflict between the Chief of Naval Operation's (CNO's) definition of principal and secondary items in addition to the actual random demand characteristics experienced by the NAVELEX managed items. Lynn's recommendations included a review of 5A advice coded requisitions to determine to what extent these requirements exceed the authorized quantity of spare equipments. He also outlined how NAVELEX could obtain funding for procuring spares for the 2Z cog items experiencing random demand. His specific recommendations to NAVELEX for obtaining the necessary funding included:

1. A review of 5A advice coded requisitions to obtain the data needed to evaluate the adequacy of the OPNAV policy for principal item spares procurement.
2. A determination of the actual repair attrition rate for 2Z cog material. Other Procurement, Navy (OPN) funding for the replacement of the attrited units could then be requested.
3. Support by OPNAV of NAVELEX's request for OPN funds.
4. Improved funding of the depot level repair program since this is the primary source for meeting random demands.

Pettersen and Casey [4] and Seebeck [5] began the analysis of the demand history of 2Z cog material in response to the Chief of Naval Material's (NAVMAT's) re-emphasis in the late 1970's on the transfer of inventory management from HSC's to Naval Supply Systems Command's Inventory Control Points.

## B. PROBLEM STATEMENT

Many of the same issues raised by the previous theses remain unresolved. NAVELEX is still managing items experiencing unplanned demand and is still unable to buy the appropriate number of spares to support these requirements. This unplanned demand coupled with NAVELEX's inability to obtain appropriate funding for 2Z cog spares is seriously hindering the level of support provided to fleet units.

The adequacy and urgency the demand for spares to support the fleet can be justified through a review of data provided by the requisitioners. The two specific data elements are the advice code and the priority. The priority placed on each requisition identifies the criticality of the material to the end user, while the advice code notifies the item manager of the disposition of the Not Ready for Issue (NRFI) assets. Currently, NAVELEX does not have the visibility to adequately review data related to priorities and advice codes. Without this visibility, they are lacking important and valuable management information regarding carcass attrition within the system (excluding repair cycle attrition) and fleet demand usage. This thesis will explore the impact on fleet support by analyzing demand data by advice code and priority. By identifying the magnitude of the degradation in fleet support, NAVELEX should have the necessary justification to request the appropriate funds to

procure and repair the necessary spares to adequately support the needs of the fleet for 2Z cog material.

## C. PREVIEW

Chapter II will cover background information relative to the management and history of 2Z cog material. The following major concepts and procedures will be discussed: 1) the distinction between principal and secondary items; 2) a brief overview of the Stock Coordination Review Process; 3) the Uniform Material Movement and Issue Priority System (UMMIPS); 4) the Casualty Reporting System utilized by afloat units to report deficiencies; and 5) the categories of requirements received by NAVELEX and the funding associated with each type of requirement.

Chapter III will outline the analysis process utilized to gather information and screen the data that was provided, and Chapter IV will analyze the data. Chapter V will provide a discussion of the main issues of the analysis and their impact on fleet support. Chapter VI will conclude with a summary and recommendations.

# II. BACKGROUND

## A. INTRODUCTION

The purpose of this chapter will be to define the terms and introduce the concepts that are relevant to the discussion of the management of 2Z cog material by NAVELEX. Principal and secondary items will be defined, and the implications of the budgetary guidance from the Comptroller of the Navy (NAVCOMPT) for spares procurement will be discussed. A brief overview of the stock coordination process will be provided along with the impact of the Uniform Material Movement and Issue Priority System (UMMIPS) and the Casualty Report (CASREPT) on 2Z cog material management.

## B. MATERIAL MANAGEMENT

In order to provide the Navy with a means of accomplishing material management and movement, the Navy Integrated Supply System was developed during World War II. This method of material management has as its single objective insuring the responsiveness of supply support so that the Navy is able to accomplish assigned missions in the most effective manner. The five principles of Navy Supply Support as delineated by the Naval Supply Systems Command (NAVSUP) have been established as follows:

1. Supply Support must be integrated with operations programs originating in the Office of the Chief of Naval Operations from which are developed specific material programs by the responsible Navy bureaus and offices.

2. Material programs developed by the various bureaus and offices of the Navy, while interrelated and interdependent, have certain peculiarities that require tailored supply support.

3. Supply Support tailored to meet the peculiar demands of specific material programs creates the necessity for a supply system of several material segments.

4. Each segment of the Navy Integrated Supply System must have its own material manager who will be responsible for providing all elements of supply support required for the programs assigned to his segment.

5. All segments of the Navy Integrated Supply System must be under the coordination and direction of a single Navy agency to avoid duplication of authority, responsibility, and functions. [6:1-3]

These principles provide the foundation upon which the Navy has built its supply system.

The Chief of Naval Operations (CNO) is responsible for planning and determining the material support needs of the operating forces of the Navy. The CNO has assigned the Chief of Naval Material (NAVMAT) the mission of providing the material support of the operating forces of the Navy [7]. To assist NAVMAT with its extensive mission assignment are five Systems Commands (SYSCOMs). These are the Naval Sea Systems Command (NAVSEA), the Naval Air Systems Command (NAVAIR), the Naval Electronic Systems Command (NAVELEX), the Naval Facilities Engineering Command (NAVFAC) and the Naval Supply Systems Command (NAVSUP). NAVAIR, NAVELEX, and NAVSEA are referred to as the Hardware Systems Commands.

Each of these Hardware Systems Commands manages the research, development, design, evaluation, acquisition, installation, logistics, and technical support and guidance for a particular class of weapons system and their related equipments for their respective areas of concern [1:63]. NAVSUP is responsible for developing and promulgating policies for the supply of material to Navy users [8:1]. NAVSUP manages the two major Inventory Control Points, the Ships Parts Control Center (SPCC) and the Aviation Supply Office (ASO).

## C. PRINCIPAL AND SECONDARY ITEMS

Navy inventory managers include systems commands, project managers, bureaus, offices and inventory control points. For purposes of this study, we will be concerned with the inventory management functions performed by the Systems Commands, specifically NAVELEX, and the Inventory Control Points, Ships Parts Control Center (SPCC) and Aviation Supply Office (ASO). Navy inventory managers are those organizational elements assigned the primary responsibility for the management of assigned groups or categories of items of supply [6:1-27]. They are charged with the primary inventory control responsibility for the availability of items of supply for Navy use.

Material assets are identified in three ways. DODINST 4140.18 defines end items, principal items and secondary items as follows:

End items - A final combination of end products, component parts, or materials that is ready for its intended use; for example, ship, tank, mobile machine shop, and aircraft.

Principal items - end items and replacement assemblies of such importance that management techniques require centralized individual item management throughout the supply system to include depot level, base level, and items in the hands of using units. Specifically, these include items of which, in the judgment of the Military Services, there is a need for central inventory control, including centralized computation of requirements, central procurement, central direction of distribution, and central knowledge and control of all assets owned by the Military Services.

Secondary items - end items and consumable and repairable items other than principal items. [9]

Based on the DOD definitions, the major distinction between principal and secondary items is the level of inventory management provided the item. A principal item is one that has been identified as requiring a level of centralized inventory management such as that provided by a Hardware Systems Command. Secondary items are managed in the less centralized manner of the Inventory Control Points. The Navy's implementation of the inventory management of principal and secondary items identifies Hardware Systems Commands as managing equipment or items which by design, use, cost, or other unique features, require direct control.

Although not specifically addressed, the DOD definition recognizes some probability of failure for principal items based on the use of the term "replacement assemblies". The

question of the level of spares support that is to be provided for principal items is not addressed.

A 1977 ASO letter further defined the Navy's management and material considerations for principal and secondary items. Principal items are to be specifically designated by the CNO and are characterized as follows:

1. Requirements determined on a planned basis by the cognizant SYSCOM;
2. Requirements based solely on planned end-use allowances and planned reserve/retention requirements;
3. Separate budget formulations through Material Planning Studies and Principal Item Stratifications;
4. Procurements financed exclusively with appropriated/investment funds;
5. Attrition based solely on major/total destruction, intended destructive use, or planned retirement;
6. Issues to end-use strictly limited to SYSCOM established allowances or special SYSCOM-approved authorizations.

Secondary items are those items not classified as principal items and exhibit the following characteristics:

1. Requirements determined by the cognizant ICP;
2. Requirements based either on estimated/observed demands or non-demand based insurance levels;
3. Budget formulations based upon standard levels-setting techniques and standard Secondary Item Stratification projections;
4. Procurements financed either with investment funds or stock funds, as governed by such factors as unit price and recoverability;
5. Attrition based primarily on normal in-service wearout or consumption;

6. Issues to end-use subject to limitation on the basis of established allowances but more typically limited only on the basis of quantitative validations.[5:78-79]

Following the guidance provided in NAVCOMPT Vol VII, major spare equipment or system components (identified as principal items) require replacement only as a result of a catastrophic event, i. e. major damage from battle, fire, collision, explosion, storm, etc. This implies that principal items do not experience random failures. Budgeting and procurement of spares for principal items is limited to one spare for 50 or less equipment installations and two spares for greater than 50 equipment installations [10:5-14-4]. Conversely, secondary items are recognized to experience random failures due to any number of reasons. The procurement of spares is intended to provide replacements for these random failures.

## D. STOCK COORDINATION

The Chief of Naval Material (NAVMAT) defines stock coordination as the departmental level supply management function which controls the assignment of material cognizance for items or categories of material to inventory managers [11]. The assignment of a particular item's management to a specific inventory manager should result in the maximum military effectiveness at minimum cost [6:1-37]. Specifically, an effective stock coordination program will enhance the effectiveness and the economy of the Navy supply

system [4:16]. As set out in Volume II, Supply Ashore, the objectives of the stock coordination program are:

1. to align material cognizance among Navy inventory managers to ensure continuous and effective supply support;

2. to achieve economy by reducing the number of generally similar items and eliminating and preventing duplication of management by the several Navy managers;

3. to the extent practicable, to concentrate all supply management functions for items or groups of items within the Navy under the cognizance of Naval Supply Systems Command inventory control points. [6:1-37]

It is adherence to this third objective which is causing problems for the Navy supply system, generally, and NAVELEX, specifically. Each item will have only one designated inventory manger, with Inventory Control Points (ICPs) managing the majority of items. A limited number of items will be assigned in specifically delineated cases for management by a Systems Command. NAVMAT emphasizes the fact that material procurement by a Systems Command does not preclude the assignment of supply management functions to respective ICPs [11]. Rather, Systems Commands are directed to fully exploit the NAVSUP-ICPs inventory management capabilities in fulfilling their program management responsibilities. The obvious thrust of material management is in the direction of the inventory control points.

The supply system recognizes a need for inventory management to be retained at the Systems Command in a

limited number of instances. Those items eligible for retention must fall into one or more of the following criteria:

1. Items in a research and development stage,
2. Items requiring engineering control decisions,
3. Items unstable in design, or
4. Items expressly assigned to a single command management by separate authorizing NAVMAT directives. [11]

Amplification of each category can be found in Appendix A.

NAVELEX conducts an annual stock coordination review of all NAVELEX-managed material for possible transfer of inventory management to ASO or SPCC. The Stock Coordination Program Coordinator (ELEX 8213) provides the Item Managers with the list of potential transfer candidates. The cognizant Inventory Manager prepares a Stock Coordination Worksheet (Appendix B) for each item under his control. Using the criteria established in Appendix A, the Item Manager annotates the recommended disposition of the item in the upper right hand corner of the worksheet. The recommended action is then coded utilizing the system delineated in Table I. In order for an item to be transferred to an ICP, concurrence is required by the Item Manager, the Cognizant Engineer, and the Acquisition Logistician at NAVELEX.

For those stock numbers that are recommended for transfer to SPCC, the NAVELEX Item Manager is responsible for insuring that the technical package for each item is

provided with the transfer. In addition to the technical data, the financial control information, procurement history, contract status, special tooling information, mobilization requirements, stock status, latest installed population data, and Equipment Dictionary (EDICT) data is provided [12].

Table I [12]
Stock Coordination Coding Criteria

| CRITERIA | CODE |
|---|---|
| Withdrawal of Interest | Ø |
| Research and Development | 1 |
| Engineering Control Decision | 2 |
| Unstable in Design | 3 |
| NAVMAT Assigned Items | 4 |
| Selected for Transfer | 5 |

## E. UNIFORM MATERIAL MOVEMENT AND ISSUE PRIORITY SYSTEM

### 1. Priority

The Uniform Material Movement and Issue Priority System (UMMIPS) provides a means of assigning priorities with regard to the movement and issue of material. The Priority Designator (PD) is utilized to determine the relative importance of competing demands for resources of the logistics systems such as transportation, warehousing,

requisition processing, and material assets [13:3-58]. The PD is a two-digit numeric code ranging from Ø1, representing the most urgent need, to 15, the lowest end of the scale. The utilization of the PD determines the time frame within which the supply system will respond to and process the requirement. The UMMIPS time standards for each PD are found in Appendix C. The time standards assigned to each PD represent the cumulative number of calendar days allowed for the entire processing cycle. The requisition cycle begins with the requisition submittal, continues thru availability determination and storage site processing, referral, transportation hold, overseas shipment/delivery and ends with the receipt take up by the requisitioner.

The requisitioner's assigned Force/Activity Designator (F/AD) and the applicable Urgency of Need Designator (UND) will determine the correct PD to utilize. Several exceptions to the assignment of the PD by F/AD and UND exist. The one exception of particular importance to this study allows for the assignment of PD Ø6 for all requisitions from afloat units for Mandatory Turn-in Repairable (MTR) items, unless a higher PD (Ø1-Ø5) is authorized [13:3-59].

2. Force/Activity Designator (F/AD)

A force/activity is 1) a unit, organization, or installation performing a mission or function; 2) a body of troops, ships or aircraft, or combination thereof; or 3) a

function, mission, project, or program. The F/AD is a Roman numeral I thru V which identifies and categorizes a force or activity on the basis of its military importance.

3. Urgency of Need Designator (UND)

The Urgency of Need Designator indicates the relative urgency of need for a requirement by force or activity. Table II outlines the general UND criteria which is the basis for the more specific criteria found in OPNAVINST 4614.1F [14].

## F. CASUALTY REPORT

The submission of a Casualty Report (CASREPT) by a naval ship, craft, shore activity or overseas base is a means of informing the operational chain of command and supporting commanders and agencies about equipment casualties that affect the combat readiness of the unit. This real time reporting status is a key element in support of the CNO and Fleet Commanders ability to analyze and improve the fleet material condition. In addition to reporting equipment malfunctions which result in the degradation of a unit's readiness, the CASREPT also reports the unit's need for technical assistance and/or the replacement parts necessary to correct the casualty. A casualty is defined as an equipment malfunction or deficiency which cannot be corrected within 48 hours and which:

1. Reduces the unit's ability to perform a primary mission, or

TABLE II [13:3-62]
General Urgency of Need (UND) Criteria

| UND | DEFINITION |
|---|---|
| A | (1) Requirement is immediate.<br>(2) Without the material needed, the activity is unable to perform one or more of its primary missions.<br>(3) The condition noted in definition (2) has been reported by established Casualty Report (CASREPT)/Not Operationally Ready Supply (NORS) procedures. |
| B | (1) Requirement is immediate, or it is known that such equirement will occur in the immediate future.<br>(2) The activity's ability to perform one or more of the primary missions will be impaired until the material is received.<br>(3) Immediate stock replenishment requirements of customer mission essential material in Fleet Ballistic Missile (FBM) submarine tenders when the on hand quantity is below the safety level and is expected to reach a zero balance prior to the receipt of stock due in.<br>(4) Outfitting and replenishment requisitions for Q COSAL (Nuclear Reactor Plant Consolidated Shipboard Allowance List) allowed reactor plan components, equipments, repair parts, special tools, and other material required to support reactor plant systems. |
| C | (1) Requirement is routine.<br>(2) Required for stock replenishment of overseas forward area supply activities, including Mobile Logistics Support Force (MLSF) ships (other than FBM submarine tenders which qualify for UND B under definition (3) above). |

2. Reduces the unit's ability to perform a secondary mission (casualties affecting secondary mission areas are limited to Casualty Category 2), or

3. Impacts on the orderly operation of the unit but does not affect primary or secondary mission area equipment (limited to Casualty Category 1), or

4. Reduces a training command's ability to provide a major segment of its program, and cannot be corrected relatively quickly by local action alone. [15:B-1]

Casualties are segmented into four distinct categories, 1, 2, 3 or 4. A Casualty Category is associated with each reported equipment casualty. It is the assignment of the particular category which reflects the urgency or priority of the casualty. Table III sets out the criteria used to determine the appropriate casualty category.

The Equipment Readiness Resource Specific Rating compares the combat-essential equipment or subsystems and major end items possessed by the reporting unit that are combat ready against those prescribed to perform the stated maritime mission. Equipment Readiness rating levels must consider both missing equipment and equipment on hand but inoperative.

In addition to providing the material support necessary to correct casualties, NAVELEX has agreed, as its stated policy, to utilize CASREPT information to the fullest extent possible in support of NAVELEX equipments [16]. The information provided via CASREPTS coupled with other

**TABLE III** [15:B-29]
**Casualty Categories**

| CASUALTY CATEGORY | EQUIPMENT CRITERIA |
|---|---|
| 1 | A deficiency exists in equipment which does not affect a primary or secondary mission area. |
| 2 | a. A deficiency exists in mission essential equipment which causes a minor degradation in any primary mission, or a major degradation or total loss of a secondary mission.<br><br>b. The unit must have reported an Equipment Readiness Resource Specific Rating of 2, 3 or 4 in primary missions affected by this casualty. |
| 3 | a. A deficiency exists in mission essential equipment which causes a major degradation but not the loss of a primary mission.<br><br>b. The unit must have reported an Equipment Readiness Resource Specific Rating of 3 or 4 for a primary mission affected by this casualty. |
| 4 | a. A deficiency exists in mission essential equipment that is worse than casualty category 3, and causes a loss of at least one primary mission.<br><br>b. The unit must have reported an Equipment Readiness Resource Specific Rating of 4 for a primary mission affected by this casualty. |

pertinent information will identify and highlight operational, maintenance and supply problems. Corrective action can then be initiated to eliminate the problem.

A requisition to order materials to satisfy a CASREPT equipment is submitted to the Navy supply system. Certain coding is required on the requisition to denote the CASREPT requirement. One of the data fields of the requisition is the document number which consists of three parts. The first is the unit identification code followed by the julian date of the requisition. The third part is a four character serial number. With CASREPTS, the first position of the serial number is filled with a "W" or "G". Other distinguishing characteristics of CASREPT requisitions can be found in the three character project code data field. Specific project codes are assigned to denote either the seriousness of the CASREPT or special programs which cover specific equipments.

## G. MATERIAL REQUIREMENTS

### 1. Planned Material Requirements

Requirements for 2Z cog material at NAVELEX fall into two categories, planned and unplanned. Planned requirements are generally connected with a specific program and as such are either identified by or submitted to NAVELEX in advance of the required delivery date. Planned requirements can be subdivided into three categories: Basic

Electronic Shore Equipment (BESEP) requirements, Ships Program Directive (SPD) requirements, and Fleet Modernization Program (FMP) requirements. BESEP requirements originate within the NAVELEX organization and represent all planned requirements applicable to shore based activities. Input to the BESEP is received from the Naval Telecommunications Command (NAVTELCOM).

For afloat units, planned requirements are tabulated based on two programs, the SPD for new construction and the FMP for Fleet Modernization. The SPD is prepared by the Naval Sea Systems Command (NAVSEA) and submitted to NAVELEX. Requirements for the FMP are a culmination of planning by NAVSEA, NAVELEX, and Type Commanders [1:83]. The specific requirements are passed to NAVELEX through the Ship Alteration Management Information System (SAMIS). Inputs from the SPD and SAMIS report are fed into SPCC's computer by NAVELEX personnel and consolidated. A report is generated which provides the inventory manager with the total planned requirements for each item, the end user of the item, the required delivery dates of the item and the funding source.

2. Unplanned Material Requirements

Unplanned requirements also have three sub-categories. The first two, Military Interdepartmental Purchase Request (MIPR) requirements, and Foreign Military Sales (FMS) are funded. The MIPR requirements are requests for

items from the other services. The Foreign Military Sales requests are material requirements to satisfy demands of U.S. allied countries.

The third sub-category of unplanned requirements is the largest. It is also the one of primary concern because these requirements are unfunded. These unplanned requirements are submitted by Naval units to satisfy random failures of the equipment.

## H. BUDGET PROCESS

Funding for the categories and sub-categories of 2Z cog material requirements varies. Under planned requirements, Shipbuilding and Conversion, Navy (SCN) funding authority accompanies the documentation passed by NAVSEA to NAVELEX for SPD requirements. For BESEP and SAMIS planned requirements, NAVELEX must budget for those requirements needed within the budget year. To iron out any disparity between NAVELEX's budget and NAVSEA's requirements, an annual Acquisition Planning Conference is held. Funding for BESEP and SAMIS requirements is accomplished through Other Procurement, Navy (OPN) Appropriation. Included in the funding authorizations are the funds to procure the authorized number of spares. To repair items procured under either the SCN or OPN appropriations, NAVELEX receives Operations and Maintenance, Navy (O&MN) funds.

Funds to support requests for FMS and MIPR unplanned requirements are provided by the respective country for the

FMS items or other services for MIPR's. Unplanned requests from U. S. Navy units are unfunded at NAVELEX. The unplanned requirements received are presently satisfied by NAVELEX via one of the following means:

1. Issuing an asset currently on hand in the NAVELEX inventory,
2. Issuing an asset obtained through repair of Not Ready For Issue (NRFI) carcasses,
3. Obtaining the customer's asset, repairing it, and returning it to the customer.

The on hand inventory may consist of assets reserved to fulfill planned program requirements. The requirement for these assets may be far enough in advance to permit issuing an asset to fill the unplanned requirement. The turned-in carcass is then repaired and returned to inventory for future use in filling the planned requirement. The on hand quantity also may include excesses created by cancellations. For example, an antenna procured for a ship's overhaul would become excess if the decision is made to decommission the ship. Additionally, through the decommissioning process, installed assets can be reclaimed. On hand inventory may also consist of the spares authorized by the initial program.

In fulfilling unplanned requirements, NAVELEX must rely on asset availability from one of the above sources. Because of the NAVCOMPT budget policy for spares, funds are not budgeted for nor authorized to stock material based on

unplanned requirements. O&MN funds are only available to provide for the repair of existing assets.

## I. DEPOT LEVEL REPAIRABLES

Depot level repairables (DLRs) are mandatory turn-in repairables (MTR's) that must be turned into the supply system for repair at an authorized designated overhaul point. All 2Z cog items are repairables and the vast majority are DLRs and must be turned in by the requisitioner when the item fails in exchange for a new carcass. The requisitioner advises the inventory manager of his intentions for disposing of the failed item with an advice code.

## J. ADVICE CODES

The advice code is a two character data field assigned by the requisitioner. Through the advice code, the requisitioner informs the inventory manager if there is a repairable carcass available for turn-in, if the item is damaged beyond repair, or if it must remain on board until a new unit is received. The advice code is a required entry on requisitions for mandatory turn-in repairables. Appendix D provides a description of each of the advice codes applicable to 2Z cog material requisitions.

## K. SUMMARY

This chapter has set the stage for the analysis and discussion that is to follow throughout the remainder of this thesis. Specific supply terms and concepts were

discussed within the context of the management of 2Z cog material by NAVELEX.

# III. THE ANALYSIS PROCESS

## A. INTRODUCTION

This chapter will explain the computer programs and screening processes that were used to reduce various data into a form for analysis. A review of the inventory management procedures performed by NAVELEX will also be provided.

## B. PRIORITIES AND ADVICE CODES

Management review of priorities and advice codes used by fleet units can reveal potential problems in fleet support. Priorities provide a real time picture of the urgency of need of the material. The use and trend of higher priorities highlights an increasing urgency by the end user for an item. In order to satisfy these demands in the required UMMIPS timeframes discussed in Chapter II, spares must be readily available. The use of certain advice codes, specifically 5A which indicates the failed unit has either been surveyed or is beyond repair, can give warning of future support problems as a result of a diminished supply of repairable units.

## C. INVENTORY MANAGEMENT PROCEDURES

A review of inventory management procedures was accomplished in two parts. First, a review of notices and instructions promulgated by OPNAV, NAVMAT, NAVSUP and

NAVELEX was conducted. These instructions provided much of the background information discussed in Chapter II relative to the handling of requirements, budgeting process, carcass tracking system, and stock coordination.

The second phase was accomplished in September, 1984 during a trip to Washington, D.C. NAVELEX provided an introduction to the stock coordination process and actual practices utilized by the inventory managers in filling requisitions received for 2Z cog items. Discussions with the project engineers revealed some of the difficulties encountered with the principal item versus secondary item support criteria. Personnel within OP 41 provided information on the funding of secondary items. They also identified the problem of identifying 2Z cog items for inclusion in the Fleet Issue Load List (FILL).

## D. DATA ANALYSIS

Data used in the analysis was obtained from the Cumulative End Item Ledger (CENILE). This file is a derivative of SPCC's Master Data File (MDF) which is updated weekly. The CENILE file is an accumulation of all transactions related to end items. It is a ten year history of transactions. For this thesis, only 2Z cog transactions from 1975 through the first quarter of 1984 were used. The CENILE file is sequenced by National Item Identification Number (NIIN) and then by document number for each NIIN. The document number contains three parts. First, a six-character Unit Identif-

ication Code (UIC) which identifies the requesting customer; second, a four-character julian date which is the date of the requisition; and third, a four-character serial number.

Discussions with personnel at NAVELEX indicated that some errors exist in the CENILE file. After reviewing a sample listing of the file, it appears that there are some duplicate transactions and some of the key data fields required for a thorough analyses are blank. Other instances observed in the CENILE tape are issue transactions without any record of the initial requisition, and initial requisitions without the corresponding issue document or cancellation. Many of these same observations were noted by Seebeck [5] in his thesis. Procedures which follow were designed to correct as many deficiencies in the CENILE file as possible.

The data analysis process comprised four phases:

1. Purification of data fields within the CENILE file,
2. Screening CENILE data and removing unnecessary transactions,
3. Segregating the remaining transactions into Advice Codes and Issue Groups, and
4. Performing statistical analysis on 2Z cog transactions.

### 1. Purification of the CENILE Tape

Within the CENILE file, 150 characters are allotted for each transaction. The specific allocation of data

fields is outlined in Appendix E. As the CENILE file is a historical record of transactions, it contains all the transactions lodged against a particular document number. These transactions are recorded in processing date sequence. The document identifier is a three digit code which identifies the purpose and the use of each individual document. Located in the first three positions of the transaction, it is a mandatory entry on each document.

The transaction history for an unplanned requirement will usually contain the originating requisition received from the customer, a referral transaction sent by the Inventory Manager at NAVELEX to the stock point authorizing the release of an asset to fill the requisition, and a transaction item report submitted by the stock point to the Inventory Manager acknowledging that the item was issued. The applicable document identifiers associated with this sequence are the A0, A4, and D7 series, respectively.

Each transaction in the sequence must cite the originating transaction's document number. Additionally, the priority is a mandatory entry field on the originating document and will remain the same throughout the requisitioning process unless it is upgraded by the requisitioner. Since 2Z cog items are repairables, an advice code is also a required field. When NAVELEX transmits the A4 referral transaction to the stock point, the advice code is replaced with a status code. The A4 transaction cites

either a ND, NE or NF status code. These status codes tell the stock point to fill the requisition from on hand stock (ND), release material from Prepositioned War Reserve Stock (PWRS) (NE), or fill the requirement from material scheduled for an overhaul/repair or production program (NF).

The initial screen through the CENILE file was conducted to ensure that by the end of the screening process the final transaction would have as many blanks filled in with data as possible. In particular, the fields of interest were quantity, document number, project code, priority, required delivery date and advice code. During this process if any field was blank, it was filled with data from other transactions with the same document number. Blank fields are usually the result of data entry omissions. The assumption was made that if the field was complete on any transaction in the transaction history for that document number then the field entry was applicable for the entire document history. The one exception was the status code of the A4 referrals. Any ND, NF, or NE status codes were converted back to the valid advice codes if the advice code existed in another transaction with the same document number. Upon completion of this phase a data file with as many of these specific data fields completed as possible was obtained.

The initial screen also eliminated any Radioactivity, Detected, Indication and Computation (RADIAC)

items. RADIAC items were eliminated because they are a special interest group of items specifically assigned to NAVELEX for management. They are not subject to the stock coordination policies.

Any NIIN's with LL-HCL-XXXX were also excluded. These are equipment or program requirements which may not have nomenclatures assigned, but they require identification for management and control purposes. When the new items are introduced at NAVELEX, they are assigned local stock numbers that contain the designation LL-HCL-XXXX. These numbers are not intended to become permanent stock numbers and are not to be used for shipping or stocking purposes [17]. The LL-HCL-XXXX stock number allows the item to be established in the Requirements Accumulator/Acquisition Tracking System (RACC/ATS) which accumulates all the 2Z cog hardware requirements. If it is later determined by NAVELEX that the item should be assigned a permanent stock number, the LL-HCL-XXXX will become an LL-HCO-XXXX OR LL-HBO-XXXX. These stock numbers are used pending the assignment of a permanent numeric stock number by SPCC.

2. Purging the CENILE Tape

The process used to purge the CENILE tape was based on the procedure outlined in Seebeck's thesis [5:62]. The details are presented in Appendix F. His CENILE record screen procedure was an improved version of the one originated by Pettersen and Casey [4:65]. The purpose of this

screen was to eliminate from the CENILE file any transactions superfluous to the demand data analysis. This included document identifiers for transfers between stock points or changes to the originating document which had no effect on the requirement, i. e. a change in the supplementary address, signal code, fund code, etc.

The major difference between the process utilized by Seebeck and the process utilized for this thesis concerns the determination of CASREPTS. In Seebeck's process, documents with a "K" in the second position of the project code and an "O" in the third position were categorized as CASREPTS. Although these requisitions may be CASREPTS because the "K" indicates an unscheduled repair and the "O" refers to the organizational level of repair, project codes with these variables may also appear on non-CASREPT requisitions. NAVSUP P-485 prescribes project codes to be used by Atlantic and Pacific Fleet units for CASREPTS. These codes along with the primary criteria of "W" or "G" in the first position of the document's serial number were the prime factors used to determine if the requisition was a CASREPT. The "W" indicates the requirement is a Not Operationally Ready-Supply (NORS) requisition submitted for a casualty report requirement as defined in Navy Warfare Publication 7. The "G" indicates the document is a Not Mission Capable-Supply (NMCS) requisition. Such requisitions represent aeronautical material required to correct an

aircraft NMCS condition, an anticipated NMCS condition (ANMCS), or a Partial Mission Capable-Supply (PMCS) condition [13:3-38].

By modifying a program designed by Professor McMasters to accommodate the data fields applicable to this study, a second screen through the data was conducted to reduce the string of transactions with the same document number into one key document. Based on the following sequence, the first document identifier in the string encountered was retained, deleting all others with the same document number: 1Ø2, 1Ø1, AØ series, A4 series, A5 series, and D7 series.

Appendix G provides a revised outline of the steps used in this thesis to complete the blank data fields, and as discussed in subsection 1, and to purge the CENILE file.

3. Segregation of Transactions

At the completion of the screening process, the remaining transactions in the working file constituted the data base utilized for the analysis. The transactions were then segregated between planned and unplanned requirements.

a. Planned and Unplanned Requirements

Planned requirements were identified by specific document identifiers, requisition serial numbers and project codes. Transactions having document identifiers of 1Ø1 or 1Ø2 are planned or non-recurring demand. For any planned requirements that did not have a document identifier of 1Ø1

or 1Ø2, the first element of the serial number was screened for a Q, V, Y, or Z. The final screen for planned requirements was a check of the project code. A project code of YY9 identifies a planned requirement. All remaining documents were assumed to be unplanned or recurring demand requirements. This file of unplanned requirements served as the data base for the analysis.

**b. Priority and Advice Codes**

The unplanned requirements were then categorized by priority and advice code. For ease of analysis the priorities were subdivided into three issue groups. Table IV identifies the Issue Groups and their corresponding priorities.

**Table IV**
**Issue Groups**

| ISSUE GROUP | PRIORITIES |
|---|---|
| I | 1 thru 3 |
| II | 4 thru 8 |
| III | 9 thru 15 |

Due to data entry errors the priority field of some of the documents was blank. A fourth category, No Pri, was created to capture this demand.

As repairables, 2Z cog material must have an advice code. Documents for unplanned requirements were

sorted by advice codes 5A, 5D, 5E, 5G, and 5S. These five advice codes represent the ones most often utilized on the originating transaction and the advice codes required for mandatory turn-in repairables. The category "Other" was created to capture advice codes other than the five listed above including blank data fields. The unplanned requirements were then sorted between CASREPT and non-CASREPT demand.

Appendix H displays the results of this sorting program. An array is presented which shows the demand for unplanned requirements sub-divided by non-CASREPT and CASREPT demand. Within each subcategory the demand is further broken down by Issue Groups. Within each Issue Group the advice codes utilized are displayed. This data array was to serve several purposes. First, the breakdown by non-CASREPT and CASREPT demand was to identify how many CASREPT requests are made for an item. This is important because the CASREPT identifies a negative impact on the mission capability of the requisitioner. Second, a review of the advice codes indicates the carcass return rate. Advice Codes 5A, 5D, and 5S identify potential shortfalls in carcass returns. The categorization by priority was performed to see if there was any relationship between the advice code and the priority.

A second program was created to evaluate what effect, if any, increased demand for a particular stock

number may have on the priority used. The frequency of demand by year by issue group was determined for unplanned requirements. This program also provided a listing of the total annual number of planned requirements for each stock number.

Frequency of demand measures the number of hits (requisitions) received by a stock number, ignoring the quantity requested. Demand, on the other hand, measures the total quantity requested of a particular stock number. Each transaction carried the same weight.

Sample output from this program is displayed in Appendix I.

4. Statistical Analysis

The last phase of the data analysis process consisted of preparing two programs which would provide statistical data on the total number of transactions in the CENILE file. The first program displayed the total number of planned program requirements (PPRs) and unplanned requirements, less RADIAC items, by year. The unplanned requirements were further broken down by CASREPTS and non-CASREPTS and then issue group within CASREPT and non-CASREPT. It also provided a percentage breakout between CASREPT and non-CASREPT and issue groups.

The second program identified those stock numbers that experienced one or more carcass losses in a particular year. Documents containing advice code 5A, which specifies

that the carcass has been surveyed as missing or damaged beyond repair, were extracted. The intent was to evaluate the impact upon 2Z cog material of the NAVCOMPT policy allowing one spare for 50 or less equipment installations and two spares for more than 50 equipment installations for principal items.

## E. SUMMARY

This chapter has introduced the importance of monitoring priorities and advice codes to identify shortfalls in fleet support. The specific steps are detailed that were utilized to obtain the purified and screened data base used in the analysis to be discussed in Chapter IV. The purification process included filling in blank data fields, eliminating RADIAC items and LL-HCL-XXXX NIINs, and reducing the transaction history for each NSN to one key document. Once obtained, the key documents were segregated between planned and unplanned requirements. The unplanned requirements were then identified by priority, advice codes, and CASREPT and non-CASREPT. This data was then sorted and presented in several different formats. Finally, two statistical analysis programs were developed. The first provided comparisons between CASREPTS/non-CASREPTS and Issue Groups. The second program identified those NSNs that had experienced carcass losses based on 5A advice code.

# IV. ANALYSIS

## A. INTRODUCTION

The number of unplanned requirements by Issue Group for the ten year data base will be reviewed to determine if an increase in demand results in an increase in priority. The unplanned requirements will be broken down between CASREPTS and non-CASREPTS.

In order to determine the magnitude of carcass losses by the end user, all documents with a 5A advice code will be extracted. These losses will be compared with the NAVCOMP policy of spares procurement for principal items to identify any supply support shortfall in meeting fleet requirements.

The problems with NAVELEX's current carcass tracking system and the new Total System Carcass Tracking Program will be discussed. Finally, the unresolved Fleet Issue Load List problem between NAVSUP and NAVELEX and the fleet support implications will be considered. This problem involves NAVSUP's desire to stock certain 2Z cog items on MLSF ships and NAVELEX's inability to support the request due to the lack of funding to procure spares for stock.

## B. INVENTORY MANAGEMENT

As of September 1984, NAVELEX managed 1541 2Z cog items. Of these, 165 were RADIAC items. These are identified by Federal Supply Class (FSC) 6665.

Reasons internal to NAVELEX account for minor increases or decreases in the number of items managed. New items or modifications to existing items approved by the Navy increase the number. A decrease may result from "Withdrawal of Interest" during the stock coordination process. NAVELEX may withdraw interest on an item for several reasons. There may have been insufficient demand recorded against an item, indicating that there is no longer a need to continue to provide supply support. A new modification, which replaces an original item or earlier modifications, may exist, superceding of the older item. Finally, a stock number may have been assigned to an item but procurement action was never initiated.

1. Cog Migration

Migration of items from NAVELEX to SPCC during the stock coordination process constitutes the major change in NAVELEX's managed population. The majority of items that migrate to SPCC become 7G cog items. When the item migrates to 7G, the cost of the item to the end user also changes. As a 2Z cog, the item is "free" to the end user. As 7G cog, the items are Navy Stock Funded (NSF) mandatory turn-in Depot Level Repairables (DLRs). The requisitioner must pay either the Standard Price when there is no related Not Ready for Issue (NRFI) unit to turn-in or the Net Price if the NRFI unit is turned in. The difference between these two prices is identified as the carcass value [18:2]. A small

percentage of the items identified for transfer to SPCC become either 1H cog or 6C cog. SPCC reviews the Source, Maintenance and Recoverability (SM&R) Codes to determine those items that will migrate to 1H cog.

The decision on whether an item migrates to 1H is influenced by the Level of Repair (LOR) Analysis done by NAVELEX during the provisioning process. The Level of Repair Analysis determines whether an item should be repaired at the intermediate level, repaired at the depot/ supplier facility or discarded in the event of a failure [19:45]. The cost to repair is evaluated against the cost of procurement. Even though an item is identified as a DLR, if the cost of repair exceeds the cost of procurement, the item will become 1H cog vice 7G cog. If the item is repairable at either the organizational or intermediate level, it automatically becomes 1H cog.

In rare instances a 2Z cog item will migrate to a 6C cog item. Items which fall into this category are stable in design and do not require any further engineering decisions. However, these items require a similar level of management as that received at the systems command. Inventory managers at SPCC monitor units by serial number control and maintain records of the units installed. Discussion with SPCC Planning Department personnel indicated that no recurring demand should occur against 6C cog material.

### 2. Reverse Migration

In rare instances an item that has previously been transferred to SPCC via the stock coordination process will be transferred back to NAVELEX. This is generally the result of latent design problems. The procedure for a reverse migration requires that the request be forwarded to NAVSUP with supporting rationale for resolution and approval [6:1-38].

## C. ANALYSIS

### 1. Demand versus Priority

Previous studies by Pettersen and Casey [4] and Seebeck [5] performed detailed analyses of demand for 2Z cog material. They evaluated demand based on whether it was a planned program requirement or unplanned requirement. Pettersen and Casey found that out of approximately 1900 line items only 960 received any demands. Seebeck's revised screening process resulted in 691 items out of 1667 receiving at least one demand. Their studies covered the 1975 to 1977 period. Six stock coordination reviews have transpired since these studies, adjusting the data base by the migration of items to SPCC and the influx of new items.

As previously stated, there were 466 non-RADIAC 2Z items in the CENILE file experiencing planned and unplanned activity from 1975 through the first half of 1984. These are the items used to compute the statistics in Appendix

J and provide the basis for the following observations. The frequency of demand for unplanned requirements has increased steadily over this period. In 1975 only 533 unplanned requisitions were received. In 1983, this amount had risen to 1742. Figure 4.1 depicts the rise in the number of transactions. Displayed with the increase in demand is the number of unplanned requirements in Issue Group I. As the frequency of demand has increased, so has the number of unplanned requirements in Issue Group I. The percentage of unplanned requirements has remained relatively constant between 37% and 40%. The increase in frequency of demand indicates that some items are breaking down more frequently and a larger inventory is required to meet the demand. The paralleling upward trend in Issue Group I transactions, from 174 in 1975 to 657 in 1983, indicates that the urgency of need by the end user in obtaining the items is increasing at the same rate as the demand. The importance of having sufficient spares available to fulfill increasing higher priority requirements is supported.

The above tests were conducted on the entire population of 2Z cog items that are in the CENILE file. To evaluate the demand for an item versus the priority placed on the requisition, two specific 2Z cog items were selected. Both items have experienced sufficient demand during the past ten years and have been items of interests to NAVELEX and the Fleet Commanders. The first item, the

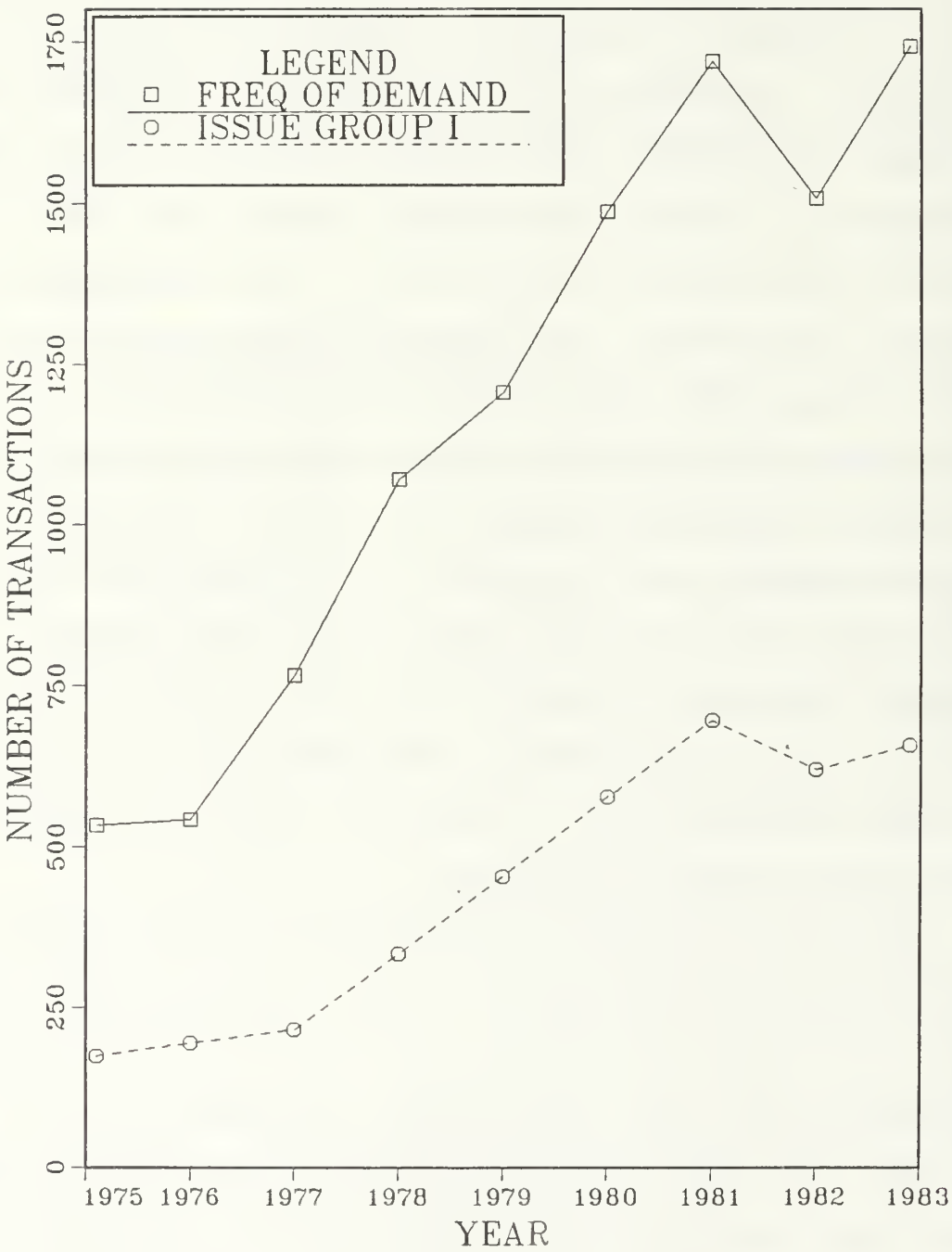


Figure 4.1
Unplanned Requirements

AS-2283A/SRN-12 antenna (NSN 5825-00-117-3746), was one of the items recommended for inclusion in the Fleet Issue Load List (FILL). The other, the AS-2537A/SR, a 35-foot whip antenna (NSN 5985-00-431-8743), has experienced a high frequency of demand during the past ten years.

Figures 4.2 and 4.3 illustrate the behavior of the two items. The frequency of demand characteristics of the two items are substantially different. The AS-2283A/SRN-12 antenna has had a progressively increasing frequency of demand. The number of installed units of this item has stabilized at 12. The AS-2537A's frequency peaked in 1981 and is dropping. This has occurred while the number of installed units of this item has progressively increased over the past ten years from 1 in 1975 to 304 in 1984.

The distribution of issue groups for these items displays a different picture. While the AS-2537A's frequency of demand is decreasing, the number of unplanned requirements in Issue Group I is relatively constant. However, as a percentage of the frequency of demand, the percentage of unplanned requirements in Issue Group I is increasing. The AS-2283A/SRN-12 antenna displays a different pattern. The number of Issue Group I requisitions has remained constant. However, Issue Group I requisitions as a percentage of the frequency of demand peaked at 44% in 1979 and has stabilized at about 21% since 1980.

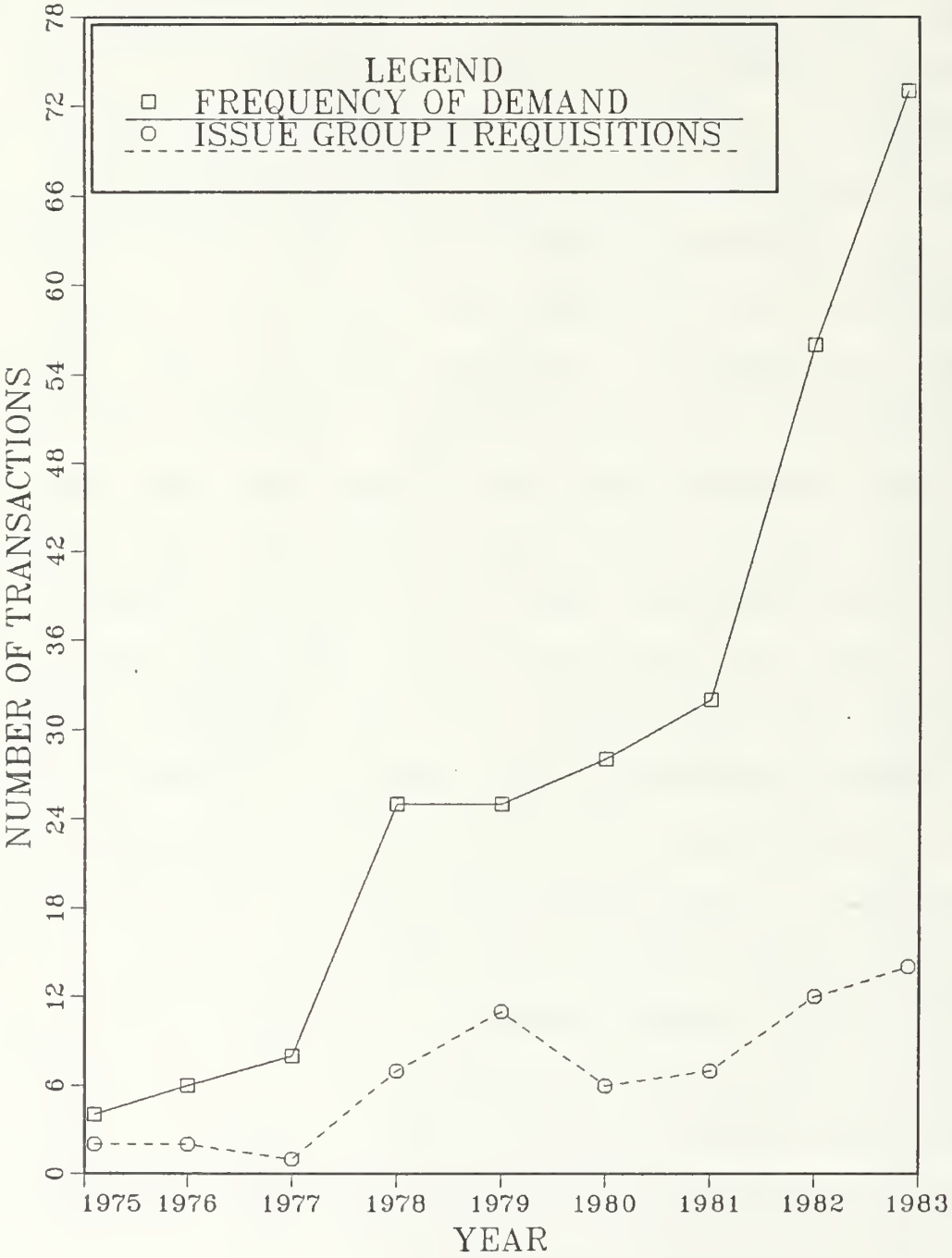


Figure 4.2
AS-2283A/SRN-12 Demand Behavior

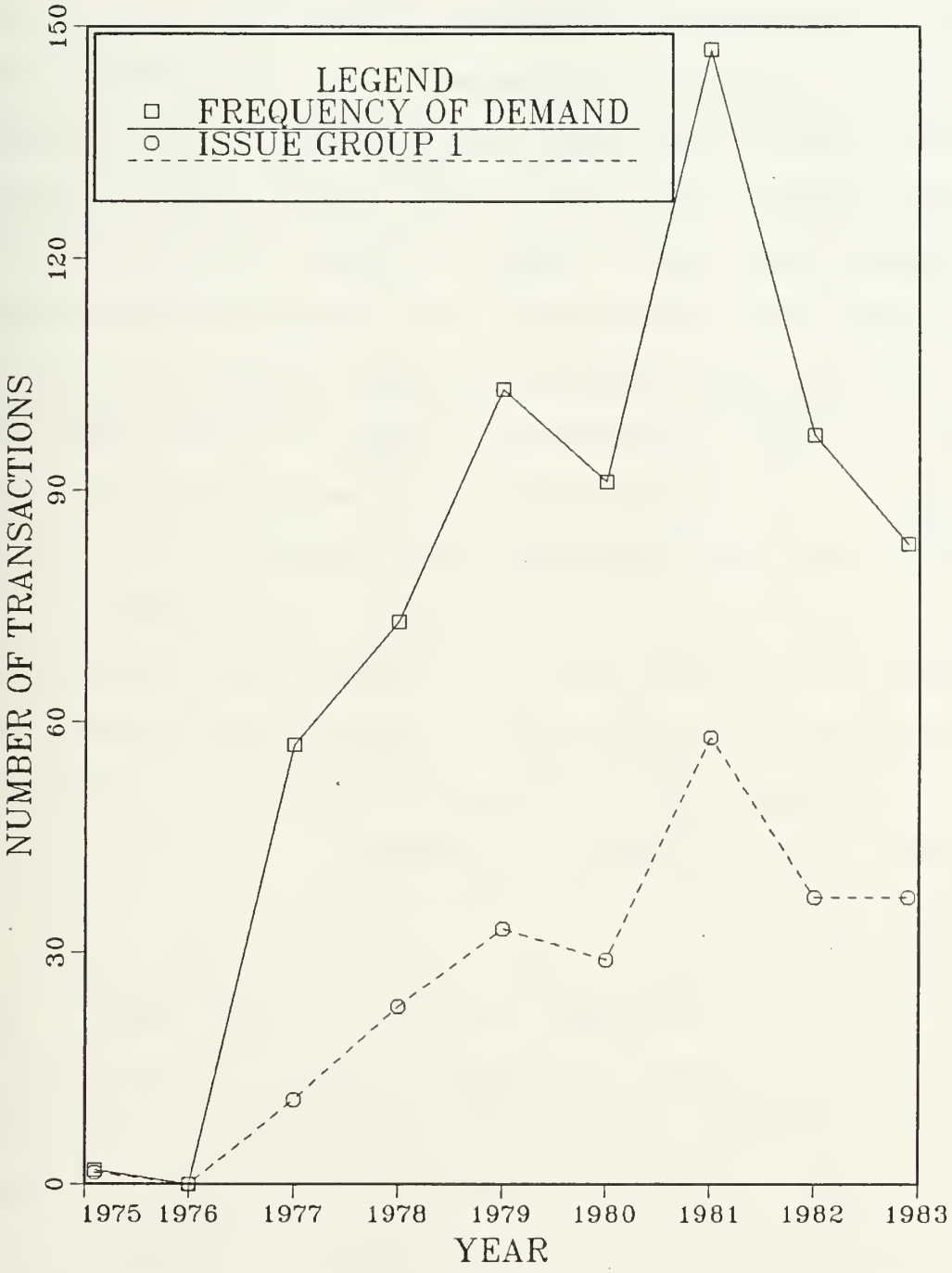


Figure 4.3
AS-2537A Demand Behavior

2. Demand Analysis

Of the 1541 items managed by NAVELEX, 578 have had activity during the past ten years. This represents 37.5% of their total managed population. Demand for these items includes both requests for planned program requirements and non-recurring or unplanned requirements. Of the active population of 578 items, 466 of these are non-RADIAC items. Since RADIAC items are not subject to the stock coordination process, they were removed from the analysis computations. Appendix J provides frequency of demand summary statistics relative to these 466 non-RADIAC items. Of the unplanned requirements, an average of 23% of the requisitions were for CASREPTS. The range of CASREPTS was from 10.1% in 1975 to a high of 28.2% in 1981. This implies that whenever a 2Z cog item fails, there is a 23% chance that the failure has had a negative impact on the mission capability of the unit. The impact increases beyond 23% when non-CASREPT Issue Group I requisitions are included.

D. ISSUE GROUPS

In order to satisfy competing material requirements, the supply system must have the means to identify the relative importance of demands not only for the material but also the demand for other logistic system resources, such as transportation, warehousing and paperwork processing. The Uniform Material Movement and Issue Priority System (UMMIPS) is used in preparing requisitions to ensure that material is

provided to users in accordance with rules that take into account the military importance and urgency of need of the requiring activity.

Requisitions for 2Z cog material generally fall into Issue Groups I or II. In the ten year period of demand observed, 87.6% of all requisitions for unplanned requirements were for either Issue Group I or II. Segregating out CASREPTS, which by their impact on mission capability automatically qualify for a higher urgency priority, 83.7% of the non-CASREPT requisitions were in Issue Groups I or II. This high percentage is expected due to the requirement for all mandatory turn-in repairable requisitions from afloat units to cite at least an Issue Group II priority of 6 [13:3-59].

The ten year data base contained 11,044 unplanned requirement requisitions. Of these 2717 were identified as CASREPTS. Of these, 61%, or 1660 of the requisitions were in Issue Group I. As figure 4.4 shows, the percentage of CASREPTS falling into Issue Group I has significantly increased from 1975 to 1983 (1984 is excluded because a full year of data is not available. However, 1984 is averaging 73.2% thru the first quarter). In 1975, Issue Group I CASREPTS accounted for 44.4% of the total CASREPTS. By 1983, this figure rose to 78.8%. Since 1980 (except 1981), the percentage of CASREPT requisitions in Issue Group I has been greater than 70%. Although the number of Issue Group I

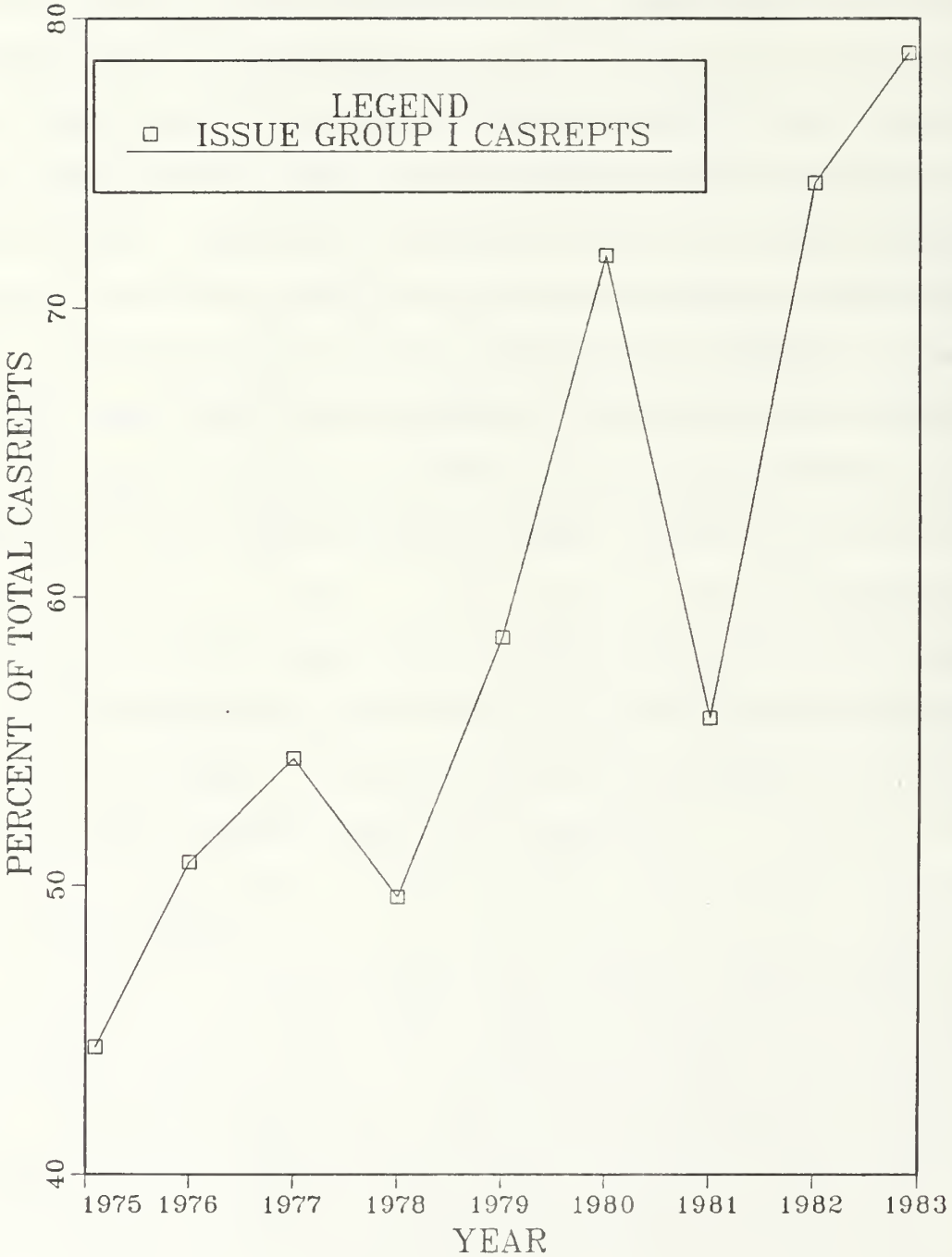


Figure 4.4
CASREPT Trend Curve

CASREPTS dropped to 55.8% in 1981, this year had the highest percentage (28.2%) of CASREPTS in relation to unplanned requirements (see Appendix J).

## E. ADVICE CODES

An advice code is entered by the requisitioner to provide coded instructions to supply sources when such data are considered essential to supply action. As 2Z cog items are repairables, this is a mandatory entry on all requisitions. Advice codes with a `5' in the first position are applicable to mandatory turn-in items. These provide useful information to inventory managers. The advice code tells the inventory manager such things as there is a carcass to turn in and it will be turned in on an exchange basis (5G), the old unit will be turned in when the new one is received (5S), the item requested will replace a mandatory turn-in repairable which has been surveyed as missing or obviously damaged beyond repair (5A). The advice code 5X appears on some 2Z items. This code indicates the requisitioner is ordering the item for stock replenishment. The repairable carcass in this case is returned when the item is issued from the requisitioner's stock. This advice code appears on some 2Z cog requisitions. However, these requisitions are not filled by NAVELEX because NAVELEX is not funded to provide on-the-shelf stock.

Some requisitioners do not utilize the 5 series advice codes when ordering 2Z items. To avoid a substitute, the

advice code 2B has been used. Unfortunately, this code does not advise the inventory manager of the requisitioner's intent to dispose of the carcass.

The advice code of prime interest to the item manager is 5A. The item manager must now balance these diminished asset holdings against known and projected requirements, attempting to compensate for the shortfall. Keeping in mind the one spare for 5Ø installed equipments and two spares for greater than 5Ø policy, the 466 stock numbers in the CENILE file were reviewed for 5A advice code requisitions.

Appendices K and L list those stock numbers that over the years lost exactly one carcass and those that lost two or more carcasses, respectively. The population figures for the items listed on these appendices were extracted from a report generated from the Weapons Systems File which is maintained by SPCC.

Of the 3Ø stock numbers in Appendix K that received one 5A advice coded requisition, fourteen have a population of 5Ø or less, entitling NAVELEX to procure only one spare. Any subsequent demands for these stock numbers that cite advice code 5A will result in the item manager having to satisfy the requirement with an asset previously identified for a future planned demand or obtaining a unit from a cancelled program or overhaul. Of those fourteen items in Appendix K with a population of less than 5Ø, five of the NSN's show zero population installed. The requirements for

these items are either a Foreign Military Sales (FMS) or the item is part of a larger equipment and the population is reported under the larger equipment. An example of this situation is found in Appendix L. The population of NSN 5985-00-738-6321, TB-15/BRA-8C is reported under the larger equipment NSN 5820-00-476-6848, TB-6/BRA-8, population 92.

A review of Appendix L reveals the following statistics. Thirty stock numbers experienced two or more carcass losses in the ten year demand period. Of these, seven had a population of greater than 50 and experienced exactly two carcass losses. In this situation, carcass losses equal authorized spares. The remaining 23 stock numbers either had two or more losses with a population of 50 or less, or more than two losses with the population greater than 50. The extreme cases are NSNs 5820-00-476-6848, TB-6/BRA-8 with a loss of 61 and 5985-00-431-8743, AS-2537A/SR with a loss of 45. Based on the criteria for spares, a shortfall in available assets should have existed.

## F. CARCASS TRACKING

In this constrained funding environment, it is essential to exercise maximum control over repairable components through increased asset visibility and advance tracking/monitoring capabilities. A repairable unit of an item which is not returned for repair may force a procurement action for its replacement. This procurement action may result in the cost of the replacement exceeding the cost of repair by a

multiple greater than one [2:25]. In addition, the long procurement lead times can degrade the readiness posture. Timely carcass returns reduce the investment required for repairable item inventories. Having the material either on the shelf ready for issue or in the repair cycle pipeline results in an improved readiness posture.

NAVELEX does not have a formal, established procedure for carcass tracking. Individual inventory managers react based upon the demand and availability of the item. If an item is in high demand, the inventory manager will follow the return of the carcass closely to get the item into the repair cycle. If there are ample items on hand, the attention given to the inoperable unit is minimal to non-existent.

The monitoring of items turned into the system has been a point-of entry system, i.e. the carcass from the end user is only tracked to the initial entry point into the supply system. Carcass tracking procedures are automated at SPCC and ASO. The HSC's can obtain data for material under their cognizance from these ICPs. NAVELEX receives feedback on the rate of return of carcasses for each NIIN, but this information does not provide specific information as to which end user specifically has or has not turned in a carcass.

Effective 1 November 1984, Total System Carcass Tracking will be implemented for the entire universe of ASO and SPCC

managed Depot Level Repairables (DLRs). The program is also being extended to repairables managed by selected Systems Commands. The primary objectives of this system are to maximize carcass returns and to generate statistical reports which will highlight activity performance in the processing of turned in carcasses [18:1]. NAVELEX has decided to only have RADIAC items monitored under the Total Systems Carcass Tracking program.

There are instances when the end user can only use a specific NSN and does not want an interchangeable or substitute NSN. Normally, the end user would cite advice code 2B which tells the item manager "do not substitute". Since the use of the "5" series is mandatory for all DLR requisitions, the end user should not cite the 2B advice code. To provide the requisitioner with the ability to advise the item manager of the status of the carcass as well as indicate "do not substitute", new advice codes have been created under the Total System Carcass Tracking system. Table IV details the new advice codes that will apply for all DLR requisitions.

TABLE V [18:3]
New Advice Codes for DLR Requisitions

| NEW CODE | DESCRIPTION |
|---|---|
| 5V | Applicable to 5G/2B combination, i.e., exchange requisition with immediate carcass return intended and substitute item not acceptable. |
| 5Y | Applicable to 5R/2B combination, i. e., exchange requisition with delayed carcass return intended and substitute item not acceptable. Exchange Advice Code. |
| 52 | Applicable to 5S/2B combination, i.e., exchange requisition with delayed carcass return intended and substitute item not acceptable. Exchange Advice Code. |
| 53 | Applicable to 5A/2B combination, i.e., surveyed or beyond repair and substitute item not acceptable. 53 is a non-exchange Advice Code and therefore will not be tracked. |
| 56 | Fill or Kill. Item is a requirement for replacement vice component repair. Requested item is a mandatory turn-in; the unserviceable unit will be turned in as an exchange. Advice Code 56 is restricted to use by Navy organic Designated Overhaul Points (DOPs); e.g., Naval Air Rework Facilities (NARFs). Exchange Advice Code. |
| 57 | Fill or Kill. Item is a requirement for initial outfitting by a contractor. Requested item is a mandatory turn-in; an unserviceable unit will not be turned in as an exchange. 57 is a non-exchange Advice Code and therefore will not be tracked. |

## G. FLEET ISSUE LOAD LIST

The Load List is a document prescribing the variety of items (range) and the quantity of each item (depth) to be carried aboard each Mobile Logistics Support Force (MLSF) ship for resupply and/or maintenance support of the combat forces. There are two types of Load lists. The Fleet Issue Requirements Lists/Fleet Issue Load List (FIRL/FILL) represents the projected material requirements for the surface ship resupply mission of the combat stores ships (AFS). The second type is the Tender and Repair Ship Load List (TARSLL). This lists the projected material requirements for the repair missions of destroyer tenders, repair ships and submarine tenders. [20:2-25-01]

NAVSUP coordinates the development and publication of all Load Lists. The Systems Commands provide technical support by recommending items to support both problem equipments and new equipments. The two most important files in preparing load lists are the Mobile Logistics Support Force (MLSF) Demand File and the Weapons Systems File. The MLSF demand file contains a history of the most recent 24 months of demand placed on all MLSF units as well as on the major fleet support activities, i.e. Naval Supply Center (NSC) Oakland and NSC Norfolk.

In June 1983, SPCC requested NAVELEX to review a listing of stock numbers for inclusion in the 1983 Fleet Issue Load List. NAVELEX did not approve the items for inclusion in

the FILL stating the items were issue restricted. In addition, NAVELEX is not funded to accommodate such recurring demand requirements, therefore, sufficient assets were not available to provide on-the-shelf stockage. In a letter to NAVELEX in October 1983, NAVSUP registered their non-concurrence of the exclusion of the 2Z cog items from the load lists [21]. They provided demand and/or CASREPT data for each of the items (Appendix M). Citing NAVSUPINST 4423.24 they stated that the non-availability of assets does not justify the exclusion or deletion of an item from MLSF load lists. NAVSUP went on to request that NAVELEX budget for and procure the sixteen items. NAVSUP also indicated that these items should be reviewed, under the stock coordination process, for transfer to SPCC [21].

The definitional problem between principal and secondary items and the subsequent funding of spares for each category resulted in a stalemate between NAVSUP and NAVELEX. In March 1984, a meeting held between NAVELEX, NAVSUP and OPNAV (OP-41) personnel failed to resolve the issue. A review of the demand data for each of the NSN's reveals that each item has received stock replenishment demand, identifiable by the 5X advice code. According to NAVELEX, NAVSUP has incorporated the recommended items into the FILL list. However, when NAVELEX receives a requisition for 2Z cog material with a 5X advice code, the requisition is rejected. Fleet units are caught in the middle. NAVSUP has directed that they carry

the material to meet the documented demand, but NAVELEX is rejecting the requisitions on the basis of lack of funding for on-the-shelf spares.

## H. SUMMARY

Of the 1541 2Z cog items managed by NAVELEX, 578 in the CENILE file experienced either planned or unplanned demand from 1975 through the first half of 1984. Excluding the RADIAC items, the number of items experiencing demand dropped to 466. This chapter has analyzed those items and found an upward trend in the frequency of demand as well as an upward trend in the percentage of CASREPTS in Issue Group I. The majority of requisitions for 2Z items fall into either Issue Groups I or II.

The impact of the use of the 5A advice code was explored. A list of NSNs that experienced carcass losses as denoted by the 5A advice code was provided. Advice code 5X was noted on several 2Z cog requisitions, but NAVELEX does not fill these requisitions because they are not funded to provide on-the-shelf stock replenishment.

# V. DISCUSSION

## A. INTRODUCTION

Having the required number of spares available to meet planned and unplanned demand is paramount to supply support. This chapter will discuss how the current management and funding policies of the Navy have limited the quantity of spares available to meet recurring or unplanned demand for 2Z cog items. The current NAVELEX carcass tracking system and the new NAVSUP Total Carcass Tracking System will be explored. This chapter will also review NAVELEX's CASREPT management and discuss the latest Stock Coordination Review meeting.

## B. RECURRING DEMAND

The achievement of fleet readiness objectives is directly related to the availability of material in the proper quantities in the right place at the right time [20:2-25-01]. For those 2Z cog items which are experiencing increasing frequency of demand, the present system of providing spares seems haphazard at best. The limited number of spares provided by NAVCOMPT's budget policy is not sufficient to support these fleet requirements. NAVELEX's present modus operandi of borrowing from future planned requirements or repairing on-board assets does not appear to be a desirable program for long term operations,

especially if more than two carcasses are lost. This may result in a shortfall of assets to satisfy future planned requirements. It could also have serious consequences in the event of war.

The challenge of providing fleet support is further complicated due to the increase in the percentage of Issue Group I CASREPTS during the ten year period covered in this study. This increase can be attributed to two very different reasons or a combination of them. Over time 2Z cog items may have assumed an increasingly greater importance to the mission capability of a combatant. Alternatively, fleet units may be arbitrarily placing higher priorities on CASREPT requisitions because of a known shortage of spares and the longer lead times required to get the item. By using the higher priority, the system should respond to the requirement in a more expedient manner.

As indicated in the data analysis, the total recurring demand for the 466 non-RADIAC items has shown an upward trend during the 1975 to 1984 time frame. Several factors have contributed to this upward trend. If a piece of equipment is experiencing random failures, as the population of installed units increases so will the demand for repaired units to replace those that have failed. Another cause would be the age of the installed population. When an equipment is first introduced into operational use, there are usually a high number of failures due to component

variations and mismatches, manufacturing processes, etc. This initial failure rate is often higher than anticipated, but eventually decreases and levels off during this "burn-in" period. When the equipment reaches a certain age, the "wear-out" period begins and the failure rate starts to increase [19:31]. Figure 5.1 illustrates a typical accepted failure rate curve for the life cycle of a piece of equipment. Thus, high demand could be expected in both the early life and very late life of a system.

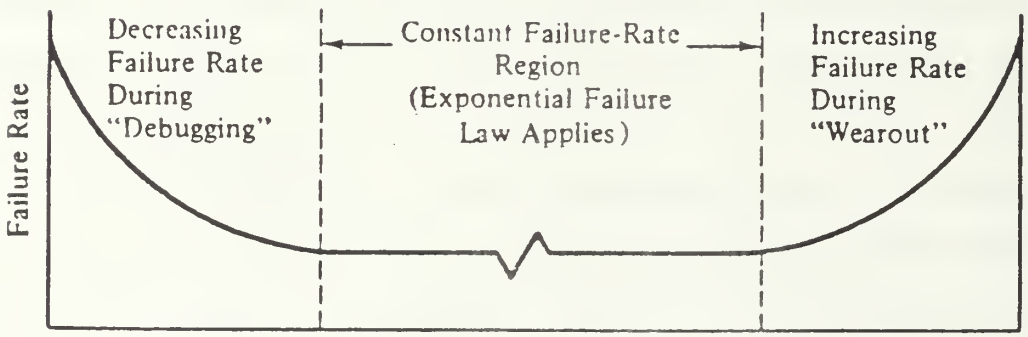


Figure 5.1
Failure Rate Curve

## C. DEMAND VERSUS PRIORITY

An investigation was also conducted to see if there was any relationship between the frequency of demand for an item and the priority placed on the requisition. The two very

active items were analyzed; one had an increasing frequency of unplanned demand but a fairly constant percentage of requests in Issue Group I, the other item had indicated an increasing percentage of Issue Group I requisitions but a decrease in the frequency of demand. The key point to keep in mind is that an increase in either the demand or the priority will provide important information. In the case of the AS-2537A antenna, which was experiencing an increase in frequency of demand, an increase in the number of spares to meet the growing demand was logical. For the AS-2283A/-SRN-12 antenna, although the demand is decreasing, the urgency of filling the requirement is greater. Purchasing more spares is not as important as ensuring that enough RFI items are available to fill the higher urgency of need of requirements.

## D. CARCASS MANAGEMENT

As noted in Chapter IV, NAVELEX presently does not have a formal carcass tracking program, but they do intend to utilize the new Total Carcass Tracking System to monitor RADIAC items. Since the new carcass tracking system is available to all HSC's, tracking all 2Z cog carcasses, especially those experiencing a high frequency of demand, seems appropriate. The status of the carcass in the system, whether in transit to a designated overhaul point, being repaired at the overhaul point, or still in the possession of the end user, is important. It is a major element of

repairables management. Getting the carcass into the repair cycle saves time and money. The prompt return of carcasses to the supply system reduces the investment required for repairable item inventories. Repair is faster than new purchases with turn around time for repairables usually ranging from 90 to 180 days while purchase lead times can often exceed two years. Repair is cheaper than procurement with costs averaging 40%-60% of replacement costs [20:3-15-01]. When NAVELEX transfers an item to SPCC under the stock coordination process, the status of carcasses in the system should also be transferred. When the migration from 2Z to 7G occurs, SPCC can capitalize the asset into the Navy Stock Fund as well as use the carcass for planning for future requirements.

One of the tools available to aid in carcass management is the advice code. The advice code can provide the inventory manager with information on the NRFI carcass. Requisitions received with an advice code of 5A or 5V tell the inventory manager that the item is no longer serviceable. The other "5" series advice codes indicate the end users intentions to either turn the item in promptly or keep it until a serviceable unit arrives.

Through carcass tracking and advice code analysis, the inventory manager is better able to pin point where and why a loss has occurred. With only a limited number of spares authorized under the current policy, it is paramount that

NAVELEX maintain tight control of the NRFI carcasses. NAVELEX's present tracking system only identifies the number of NRFI carcasses that are received at a designated overhaul point. They do not have the visibility to identify the source of the turned in NRFI carcass. Utilization of the Total Carcass Tracking System would eliminate these shortfalls and provide NAVELEX with additional management data to better control carcass returns.

## E. BUDGET POLICY

As indicated in Appendices K and L, NAVELEX is managing a number of items for which the carcass losses by the end user are greater than the number of spares authorized by the present budget policy. The dollar value of 2Z cog losses by the end user has averaged $543,458 per year. The number of stock numbers exceeding the authorized spares increases still further when the repair survival rate is taken into consideration.

The basis for not funding the replacement of these losses stems from the "policy" that only principal items are managed by HSC's, and the budgeting for principal item spares is subject to NAVCOMPT's limited spares policy. However, the data analyses in this study have shown that there has been unplanned demand for 2Z cog items since 1975 at least and that it is increasing. Of those items experiencing demand, 84.5% had at least one unplanned requirement during the past ten years. During the same timeframe, 54%

of the items experiencing demand had at least two unplanned requirements in at least one of the years. Clearly, recurring unplanned demand is present. Thus, whether the items experiencing the demand are called principal items or secondary items is irrelevant.

Funding to replace lost carcasses both through attrition at the depot level and losses at the end user level is needed as well as obtain initial spare stocks. Even with the sophisticated communications and rapid transportation systems of today, the present system of locating material at stock points awaiting release authority from NAVELEX could add several days to the receipt time for a ship deployed to the Indian Ocean. Therefore, certain items need to be incorporated into FILL lists and stocked aboard MLSF ships (see Appendix M). This will put material in the proper quantities in the right place at the right time and provide the needed increased fleet support posture for forward deployed ships.

## F. CASREPT MANAGEMENT

Various discussions with NAVELEX personnel indicated a dissatisfaction with the CASREPT data provided to them by SPCC. They currently receive data in Equipment Identification Code (EIC) sequence in descending order of total CASREPTS and total parts usage for a two-to-three year period. Concentrating on the top ten items, they then look for possible trends with respect to failures, maintenance,

design, etc. The fallacy with concentrating on the top ten items is the fact that no consideration is given to the age of the equipment or the size of the population installed in the fleet. NAVELEX has this information available but apparently does not use it. An equipment experiencing a high number of CASREPTS, but with a large installed population may not, in fact, have a problem with design stability. Conversely, an item which receives a significantly smaller total number of CASREPTS, but has a very limited fleet population may show evidence of design problems. Screening only the absolute numbers would exclude this latter item from management review.

The recurring comment in discussions with NAVELEX was that the data they received from SPCC was too broad in scope and contained too many inaccuracies. Hence, they provided CASREPT information on specific items to top management and engineers only when requested but make no recommendations for corrective action.

## G. STOCK COORDINATION

NAVELEX did not hold a Stock Coordination Review Meeting in 1983, so two reviews were held in 1984. The first review was held in January, 1984. The second review was held on 5-6 December 1984. In addition to the review criteria in Appendix A, NAVELEX provided the following additional guidance to Item Managers:

1. 2Z Cognizant items such as components and low value/ high volume equipments and/or repair parts, should be considered prime candidates for transfer. In addition, items that are multiservice used, whether Navy is lead service (Primary Inventory Control Activity (PICA)) or supported service (Secondary Inventory Control Activity (SICA)) should be considered as priority candidates for transfer.

2. The age of an item, as determined by the date when the item entered the cataloging system, should also be considered in selecting 2Z cognizance items for migration to SPCC. Items more than a few years old, especially those entering the file prior to 1974, should be viewed as likely candidates for transfer. [22]

The above guidance seems to place more emphasis on the demand exhibited on an item. Those items with high volume requirements are experiencing recurring unplanned demand. Over time the design of the item would seem to stabilize, making it a candidate for transfer under NAVMAT's stock coordination criteria. Finally, old equipment could be expected to experience higher frequency of demand due to wear-out.

## H. SUMMARY

Items managed by NAVELEX do incur unplanned demand and there are insufficient spares available to meet all demand within the UMMIPS time standards. This chapter emphasized the potential impact this can have on fleet support and fleet readiness. The problems with the current carcass tracking procedures used by NAVELEX and the inadequacy of funding to support spares aboard the MLSF ships were discussed.

This chapter concluded with a review of CASREPT management at NAVELEX and the latest guidance provided for the most recent Stock Coordination Review meeting.

# VI. SUMMARY, CONCLUSIONS, RECOMMENDATIONS

## A. SUMMARY

Previous theses on the management of 2Z cog material were introduced in Chapter I. Many of the theses completed in the past have evaluated the demand data of 2Z cog items. The results have shown that many of the items managed by NAVELEX experience unplanned demand. As a result of this demand, they also identified the funding shortfall NAVELEX experiences in obtaining the necessary spares to support the demand. These theses set the stage for evaluating the magnitude of the impact the lack of spares for 2Z cog material can have on fleet support and the mission capability of fleet units. The advice codes and priorities placed on requisitions received by NAVELEX were used as the measure of evaluating this impact.

Chapter II provided background information on the terms, procedures, definitions and methods applicable to 2Z cog material. Specifically, a brief history of the development and organization of the supply system was introduced. The definitions of end items, principal items, secondary items, and depot level repairables was outlined. The budget policy applicable to funding principal items was provided and the method of migrating items to and from NAVELEX was covered.

Lastly, the chapter denoted the time standards, priorities and advice codes applicable to 2Z cog requisitions.

The next chapter, Chapter III, explained the data that was used in the analysis, its origin and the process utilized to manipulate and extract the data relevant to this study. Chapter IV discussed the results of the analysis process performed in Chapter III. The advice code of 5A, the number of unplanned CASREPTS and non-CASREPTS, and a breakout by Issue Group were analyzed. The present system of tracking carcasses at NAVELEX was presented and compared against the new Total System Carcass Tracking program. Chapter IV concluded with the problem of funding spares for the FILL aboard MLSF ships.

Chapter V discussed how the current management and funding policies have limited the quantity of spares available to meet unplanned demand. Problems with the existing carcass tracking system were explored and the advantages of the new Total Carcass Tracking system were outlined.

## B. CONCLUSIONS

This study supports the major conclusion derived from the previous studies - that items managed by NAVELEX do in fact incur unplanned or recurring demand. Of the items currently managed by NAVELEX, 34% experienced either planned or unplanned demand over the last ten years. Of primary concern in this study were those items receiving recurring demand because they have the greatest impact on the fleet,

especially in light of the NAVCOMPT policy of limiting spares for principal items. By studying the advice codes of recurring demand, it was determined that NAVELEX is managing items which lose more carcasses at the end users level than there are spares authorized for by the budget process. NAVELEX also rejects requisitions from the end users which contain stock replenishment advice codes. Requisitions from MLSF ships to support FILL requirements are also rejected because NAVELEX is not funded to support these recurring requirements.

The urgency of need by the customer determines the priority placed on the requisition. This study shows that there has been an increase in the number of CASREPTS in Issue Group I as well as an increase in the recurring demand for 2Z material. These upward trends indicate the importance 2Z cog material has in maintaining mission capabilities and fleet readiness.

The present funding policy for 2Z cog material is not sufficient to provide the appropriate number of spares to support those items experiencing recurring demand. Through migration of the items to SPCC during the stock coordination process, this problem could be solved. Under the inventory management of SPCC, the necessary spares could be stocked with Navy Stock Fund (NSF) dollars. However, recurring demand is not a consideration nor a reason for migrating items. For items that show no design instability, NAVELEX

should transfer the item to SPCC under the Stock Coordination process. SPCC has the means through the UICP budget planning and demand forecasting models to provide the adequate level of support. Additionally, SPCC has the means through the DLR Total System Carcass Tracking program to ensure the turn-in of NRFI carcasses to the appropriate depot level repair facility. For those items surveyed or lost by the end user and for those carcasses lost in the repair cycle, SPCC has the funding through the NSF to support the replacement items.

A change in the funding policy will be appropriate for those few items that are identified as design unstable. NAVELEX should retain management of these items, but must receive the funding necessary to meet the recurring demand requirements without degrading the asset posture for planned requirements. Without any change in policy and with the upward trend in recurring demand, the readiness and mission capability of fleet units will be impaired.

## C. RECOMMENDATIONS

### 1. Recommendation No. 1

In lieu of any current policy changes, NAVELEX should vigorously support the stock coordination process to ensure only items which are not stable in design are retained for management. Under the present system, transferring items to SPCC is paramount to obtaining spares to support fleet requirements.

2. Recommendation No. 2

OPNAV and NAVMAT need to evaluate the definitions of principal and secondary items and the spare support associated with each type. The definitions utilized by the Navy are more restrictive than those promulgated by DOD. This has created part of the problem of establishing a viable policy for the appropriate spares support.

3. Recommendation No. 3

NAVCOMPT should recognize that some 2Z cog items incur recurring demand and support the funding for additional spares for these items. The present NAVCOMPT policy for supporting spares for 2Z cog material is not sufficient to support the fleet demand.

4. Recommendation No. 4

NAVELEX should take advantage of the new Total Carcass Tracking System program. All 2Z cog item carcasses should be included in the program, with special emphasis on those experiencing a high frequency of demand. The new program provides the inventory manager with valuable information on the disposition and status of carcasses in the entire supply/ repair cycle.

5. Recommendation No. 5

Further study should be done to investigate the feasibility of funding spares for 2Z cog items with Navy Stock Fund (NSF) dollars. This would be similar to the method of support provided by SPCC. NAVELEX would then

receive a portion of the NSF dollars to support those recurring demands; part of it would go towards repair and part would go towards replacing attrition loses.

APPENDIX A [12]

SYSTEMS COMMANDS CRITERIA FOR IDENTIFYING RETENTION ITEMS DURING STOCK COORDINATION REVIEWS

1. Criteria

a. Items Managed at Systems Command Level. Items managed by Systems Command (or their field activities) will be limited to items meeting one or more of the following criteria:

(1) Items in a Research and Development Stage. Items qualifying under this category must be under development and not yet in Fleet operational use.

(2) Items Requiring Engineering Control Decisions. This criterion is applicable when a high degree of engineering judgment is required concerning design or relationships to a system. It pertains principally to those items requiring engineering decisions during production or prior to each issue. Items that remain in this category after two (2) years of operational use must be justified in the same manner as Criteria Code Four (4) items.

(3) Items Unstable in Design. Items which are determined by an engineering decision to be highly subject to design change of the item itself, or replacement of the item through modification of its next higher assembly. End items, components, assemblies, test and evaluation equipment unstable in design do not exclude their intrinsic parts from stock coordination review. Items retained for management under this category will be transferred to an ICP after completion of two (2) years operational use unless a major design change or modification has been approved and/or being accomplished at the time of the Stock Coordination Review. Further retention upon completion of the approved design change or modification must be justified in accordance with Criteria Code Four (4).

(4) Items Expressly Assigned to a Single Command Management by Separate Authorizing NAVMAT Directives. Items qualifying for this category are limited to items of major importance and depot level reparables. Inclusion in this category is a matter for CNM decision based upon justifying rationale submitted by the originating Command. As a general rule items changed from Criteria Codes (2) and (3)

into this code will be transferred to an ICP for inventory management even though the procurement function remains at the headquarters level. Items assigned under this criterion will be considered as an adjunct to stock coordination and therefore, are not precluded from formal review when scheduled.

APPENDIX B

Transfer _____ Cog _____
Retain _____
Withdraw Interest _____
Retention Code _____

1984 STOCK COORDINATION WORKSHEET

| NSN | NOMENCLATURE AND NAME |
|---|---|
| | |

| RELEASING IM | PROGRAM DIRECTOR/MANAGER |
|---|---|
| NAME: | NAME: |
| CODE: EXT: | CODE: EXT: |

1. Date Entered Cataloging System:

2. Quantity in stock: RFI _____ NRFI _____

3. Installed Population: Ashore _____ Afloat _____

4. Past year's random demand: _____

5. Estimated future requirements:

| TYPE FUND | FY-84 FUNDED QTY | FY-84 FUNDED DOLLARS | FY-84 UNFUNDED | FY 85 | FY 86 | FY 87 | FY 88 |
|---|---|---|---|---|---|---|---|
| | | | | QUANTITY ONLY | | | |
| OPN | | | | | | | |
| SCN | | | | | | | |
| O&MN | | | | | | | |
| FMS | | | | | | | |
| OTHER | | | | | | | |

6. Unit Price: _____

7. Past FY's O&MN expenditures: _____

8. Contract Information:

a. Number: N00_____; Status: Open _____ Closed _____/Date Closed _____
(complete b and c only if contract is open)

b. Manufacturer(s): _____

c. Copy of Contract Attached: YES ____ NO ___ (explanation: _____)

9. Item to be reprocured: YES _____ NO _____

   a. If yes, will technical package be supplied to SPCC at time of transfe.: YES _____ NO _____

   b. If technical package is not available:

      (1) when will it be supplied: _____
      (2) how long is required by NAVELEX for technical package development after request from SPCC for this package: _____

10. If demand for item is descending and replacement item has been designated:

    a. Anticipated start replacement date: _____
    b. Anticipated completion date: _____
    c. HCL(s) assigned: YES ____ NO ____
       1. List HCL(s) _____
       2. Do you recommend withdrawal of interest from HCL(s): YES __ NO __

11. Qualified Producer's List (QPL) Item: YES __ (what is number _____) NO ____

12. ILS PLAN: YES ____ NO ____

13. If recommended for transfer, provide name of:
    a. Designated Acquisition Engineering Agent (AEA) (by engineer): _____
    b. Designated In-Service Engineering Agent (ISEA) (by ELEX 8248): _____

14. Remarks: (special manufacturing/Supply Data (such as special issue restrictions, item fabricated and by whom, repair information, interchangeability/substitutability data, etc.))

15. PICA assignment: YES ____ NO ____; SICA assignment: YES ____ NO ____

16. PICA is the following branch of service: _____

17. Designated depot(s): _____

18. DMISA executed: YES ____ NO ____
    If Yes, name of the agent: _____

_____
IM Signature/Date

_____
ENGR Signature/Date

_____
AL Signature/Date

_____
ELEX 8248 Signature/Date

## UMMIPS TIME STANDARDS FOR REQUISITIONED MATERIAL

| Priority Designator[1, 4] | CONUS Requisitioners, Canada, or POE[2] | Alaska, Hawaii, Caribbean, Central America, North Atlantic, Northern Europe[2, 3] | South America, Western Mediterranean[2, 3] | Africa, Eastern Mediterranean[2, 3] | Far East, Southeast Asia, Australia[2, 3] | Middle East (Persian Gulf, Red Sea)[2, 3] |
|---|---|---|---|---|---|---|
| Ø1-Ø3 | 8 | 12 | 12 | 12 | 13 | 12 |
| Ø4-Ø8 | 12 | 16 | 16 | 16 | 17 | 16 |
| Ø9-15 | 31 | 69 | 74 | 81 | 93 | 98 |

[1]When material is immediately issued by the stock point to which a requisition is submitted (or if the requisition is submitted directly to an ICP), decrease the time standards in this chart by one day for PD Ø1-Ø8 requirements, and by two days for PD Ø9-15 requirements.

[2]These time standards represent the cumulative number of calendar days normally required for:

1. requisition submittal;
2. availability determination and storage site processing;
3. referral (see Note 1);
4. transportation hold (containerization and consolidation when required), and CONUS in-transit to CONUS requisitioner, Canada, or POE;
5. overseas shipment/delivery;
6. receipt take up by requisitioner.

[3]Time standards for PD Ø9-15 requirements also apply to any PD Ø1-Ø8 cargo which may be diverted to surface movement. However, high priority requirements will be diverted to surface movement only when:

1. a temporary blanket authorization is granted by JCS or the cognizant CINC (CINCLANTFLT/CINCPACFLT/CINCUSNAVEUR);
2. a specific authorization is provided by the requisitioner; or
3. the characteristics of the material preclude air movement due to size, weight, or hazard classification.

[4]PD Ø1-Ø3 requisitions and PD Ø1-Ø8 NORS/NMCS requisitions will be processed by the supply system on a 24-hour workday, 7-day workweek basis. PD Ø4-Ø8 non-NORS/PMCS requisitions and PD Ø9-15 requisitions will be processed on an 8-hour workday, 5-day workweek basis; however, consistent with the volume of requisitions required to be processed, the work shifts of supply activities may be adjusted, as necessary, to meet UMMIPS time frames.

APPENDIX D [23:15]

ADVICE CODES

| CODE | EXPLANATION |
|---|---|
| 5A | Replacement certification. Requested item is required to replace a mandatory turn-in repairable which has been surveyed as missing or obviously damaged beyond repair. |
| 5D | Initial requirement certification. Requested item is a mandatory turn-in repairable required for initial outfitting/installation or increased allowance/stockage objective; therefore, no unserviceable unit is available for turn-in. |
| 5E | Release of Planned Requirement or Reservation for:<br>(1) Mandatory turn-in repairable and no unserviceable unit is available for turn-in;<br>(2) Field Level Repairable;<br>(3) Consumable. |
| 5G | Exchange certification.<br>(1) Requested item is a mandatory turn-in repairable for which an unserviceable unit will be turned in on an exchange basis under the same document number as that used in the requisition; |
| 5R | Release of Planned Requirement or Reservation is mandatory turn-in repairable and an unserviceable unit is or will be turned in. |
| 5S | Remain-in-place Certification. Requested item is a mandatory turn-in repairable for which an unserviceable unit will be turned in on an exchange basis after receipt of a replacement (serviceable) unit. Turn-in will be on the same document number as that used in the replacement requisition. |

5X Stock Replenishment Certification for:

(1) 7 Cog Items - for use by Financial Inventory Reporting (FIR) activities in requisitioning DLRs for stock to be retained in Navy Stock Fund. 5X is not to be used for end-use accounts. All 5X transactions will be at standard price and there will be no directly related turn-in.

(2) Other than 7 Cog Items - Requested item required for stock replenishment of a mandatory turn-in repairable for which unserviceable units have been or will be turned in for repair (to be used only when circumstances preclude citing the same document number in both the requisition and turn-in document).

APPENDIX E [4:63]

CENILE FILE DATA FIELDS

| DATA ELEMENT | | DESCRIPTION |
|---|---|---|
| 1-3 | * | Document Identifier |
| 4-6 | | Blank |
| 7 | | Media/Status Code |
| 8-11 | * | Federal Supply Class |
| 12-20 | * | National Item Identification Number (NIIN) |
| 21-22 | | Special Material Identification Code |
| 23-24 | * | Unit of Issue |
| 25-29 | * | Quantity |
| 30-43 | * | Document Number |
| 44 | | Suffix Code |
| 45-50 | | Supplementary Address |
| 51 | | Signal Code |
| 52-53 | | Fund Code |
| 54 | | Distribution Code |
| 55-56 | | Cognizance Code |
| 57-59 | | Project Code |
| 60-61 | * | Priority |
| 62-64 | * | Required Delivery Date |
| 65-66 | * | Advice Code |
| 67-69 | | Activity Routing Indicator |

| DATE ELEMENT | | DESCRIPTION |
|---|---|---|
| 70 | | Purpose Code |
| 71 | | Condition Code |
| 72 | | Management Code |
| 73-75 | | Transaction Date |
| 76 | | Material Control Code |
| 77-78 | | Blank |
| 79-80 | | Activity Sequence Code |
| 81-84 | * | Error Codes |
| 85-88 | | Blank |
| 89-90 | * | Process Year |
| 91-95 | * | Local Routing Code |
| 96 | | Blank |
| 97-105 | | Original Transaction NIIN |
| 106-115 | | Repairable Item Model Code |
| 116-140 | * | Equipment Name |
| 141 | | Item Management Code |
| 142 | | Blank |
| 143-145 | | Record Establish Day |
| 146-150 | | Blank |

* Data Fields used for Data Analysis

APPENDIX F

CENILE RECORD SCREENING PROCESS [REF 5:62]

In order to categorize demand data recorded on the CENILE tape, the following sequence of screening was accomplished:

(1) All documents citing document identifiers 105, A6-, ABV, DAC, DAD, DGA, DZA, D4-, D6-, D7K, D8- AND D9- were purged from the tape. (A4R documents previously purged were retained.)

(2) All documents citing a julian date earlier than 1975 were purged.

(3) Data elements which were not desired for final data analysis were purged, leaving only 44 elements of information per record.

(4) Documents with document identifiers of 100 were matched with either 101 or 102 documents by requisition serial number. Matched documents were deleted, only one match per 100 document being allowed.

(5) Documents with a document identifier of AC- were matched to either AO-, A4-, OR A4R documents by requisition number and quantity. (A3- and A5- documents were not screened against AC- documents because it was determined that all A3- and A5- documents had already been eliminated in the previous screens.) Partial cancellation of AO- and A4-

documents took place if the requisition serial number matched as AC- documents, though the quantities differed. Cancellation of A4R documents only took place if both requisition serial numbers and quantities matched. Examination of document sequences dictated this testing procedure.

(6) All remaining AC- documents were deleted.

(7) Remaining 1ØØ documents were screened against A4R and D7- documents. A matched requisition serial number caused the retention of the 1ØØ documents as a completed Planned Program Requirement (PPR) transaction.

(8) Any remaining 1ØØ documents were deleted.

(9) Using the sequence below, the first document identifier encountered for a given requisition number was retained, deleting all others with the same requisition number: 1Ø2, 1Ø1, AO-, A4-, A4R, A5- and D7-.

Those remaining documents were screened further to classify them into the various types of demand.

(1) Documents were divided up into "afloat" or "ashore" by screening the service designator code for "V" or "R", both of which correspond to an afloat funded requirement. Ashore funded requirements were determined by failing this test. These ashore items were further broken down into categories of Unplanned and PPR demands.

(2) All A4R documents which had not been previously deleted were classified as "Non-requisitioned, Released" demands because there was not a record of either an AO- or

A4- document on file.

(3) CASREPTS were determined by screening afloat A0-, A4-, A5-, and D7- documents against the following:

(a) Documents with "G" or "W" in the first position of the serial number, or

(b) Those documents with a project code of 706, 707, 756, 757, or XB1, or

(c) Those documents with a "K" in the second position of the project code and a "0" in the third position.

(4) Remaining D7- documents were classified as "Unauthorized Issues" since the only record available was the Transaction Item Report (TIR) indicating that an issue had been accomplished.

(5) If the documents remaining were coded Afloat but not a CASREPT or a planned requirement, then it was considered "Unplanned Afloat."

(6) Documents with a document identifier of 101 or 102 were classified as incomplete PPR's, meaning that the material on reserve had not yet been issued.

## APPENDIX G

## REVISED CENILE RECORD SCREENING PROCESS

Program 1 This program took 80 predetermined characters from the 150 characters per transaction in the CENILE file and performed the following operations. The program then filed 76 of the characters in a new file. Operations performed are:

a. Any documents with a process year before 1975 were deleted.

b. Any documents with blank fields were filled with information from other documents if the document numbers match.

c. Any documents with an NF, ND, or NS status code were replaced with a "5" series advice code if another document with the same document number was available.

d. Any documents with FSC 6665 (RADIAC items) were purged.

Program 2 This program recalled the 76 characters filed in Program 1 and performed the following functions. The data at the end of Program 2 was deposited in a new file. Operations performed were:

a. All documents citing document identifiers 105, A6-, ABV were purged from the tape.

b. Any NIIN's beginning with LL-HCL-XXXX were purged.

c. Any documents with blank fields in the NIIN were purged.

d. Any documents with an error code beginning with 8 were eliminated.

Program 3 This program performed the last screening requirements essential to purify the data base. Operations performed were:

a. Any documents citing DAC, DAD, DGA, DZA, D4-, D6-, D7K, D8- and D9- in the document identifier blocks were purged.

b. Any duplicate documents were eliminated.

c. Documents with a document identifier of 1ØØ were matched with either document identifier 1Ø1 or 1Ø2 documents by requisition number. Matched documents were deleted. Only one match per 1ØØ document was allowed.

d. Documents with a document identifier of AC- were matched to either AO-, A4- or A4R documents by requisition number and quantity. Partial cancellation of AO- and A4- documents took place if the requisition serial number matched an AC- document, though the quantities differed. Cancellation of A4R documents only occured if both requisition serial numbers and quantities matched.

e. All remaining documents with a document identifier of AC- were deleted.

f. Documents remaining with a document identifier of 1ØØ were screened against A4R and D7- documents. A matched requisition number caused the retention of the 1ØØ documents as a completed Planned Program Requirement (PPR) transaction.

g. Any remaining 1ØØ documents were deleted.

h. Using the sequence below, the first document identifier encountered for a given requisition was retained deleting all others with the same requisition number: 1Ø2, 1Ø1, AO-, A4-, A4R, A5-, and D7-.

Program 4 Data resulting from Program 3 was categorized into a matrix showing Issue Groups on the horizontal axis and Advice Codes on the vertical axis. Only unplanned requirements were categorized. The unplanned requirements were sub-divided into CASREPT and non-CASREPT demand.

a. Documents with a Q, V, Y, or Z in the first position of the serial number or documents with a YY9 in the project code were considered as planned requirements. All remaining documents were identified as unplanned requirements.

b. Documents with the G or a W in the first position of the serial number were considered as CASREPTS. Also documents with a project code of 702, 706, 707, 711, 729, 733, 740, 743, 747, 752, 756, 757, 765, 792 were identified as CASREPTS.

c. The requisition quantity from each document was used to tabulate demand.

Program 5 Program 3's data file was used to determine the frequency of demand for each NIIN. This produced a matrix with Issue Groups on the horizontal axis and the yearly totals on the vertical axis.

a. Each transaction counted as one.

b. CASREPTS and planned and unplanned requirements were determined as in Program 4.

Program 6 Utilizing the date file of Program 3, this program provided statistical data on the transaction in the file.

a. Each document had equal weight, irregardless of the quanity requisitioned.

b. CASREPTS and planned and unplanned requirements were determined as in Program 4.

# APPENDIX H

CALENDAR YEARS 1975-1984 SEMI-ANNUAL DEMAND BY ISSUE GROUP AND ADVICE CODE FOR NIIN:00-117-3746

LRC:x2300 NOMENCLATURE:AS-2283/SRN-12

**********NON-CASREPT DEMAND**********

1975

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| SA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SG | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NO ADV | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| OTHER | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOTAL | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 3 |

1976

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| SA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SG | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| SS | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NO ADV | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 5 |

1977

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| SA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SG | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 3 |
| SS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SD | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| NO ADV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOTAL | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 5 |

1978

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| SA | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SG | 0 | 1 | 1 | 3 | 0 | 1 | 0 | 0 | 6 |
| SS | 2 | 1 | 4 | 3 | 0 | 0 | 0 | 0 | 10 |
| SD | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| NO ADV | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| OTHER | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| TOTAL | 3 | 3 | 7 | 8 | 0 | 1 | 0 | 0 | 22 |

1979

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| SA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SG | 1 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 4 |
| SS | 0 | 0 | 3 | 2 | 0 | 0 | 0 | 0 | 5 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NO ADV | 2 | 0 | 1 | 1 | 0 | 1 | 0 | 0 | 5 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 3 | 1 | 4 | 4 | 0 | 2 | 0 | 0 | 14 |

**********CASREPT DEMAND**********

1975

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL | YEAR TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| SA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SG | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| SS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NO ADV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| TOTAL | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |

1976

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL | YEAR TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| SA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SG | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 3 |
| SS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NO ADV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 6 |

1977

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL | YEAR TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| SA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SG | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 2 | 5 |
| SS | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NO ADV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| OTHER | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| TOTAL | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 8 |

1978

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL | YEAR TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| SA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| SX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SG | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 7 |
| SS | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 11 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| NO ADV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| OTHER | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 4 |
| TOTAL | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 25 |

1979

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL | YEAR TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| SA | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SX | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SG | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 |
| SS | 1 | 3 | 2 | 2 | 0 | 0 | 0 | 0 | 8 | 13 |
| SD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NO ADV | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 3 | 4 | 2 | 2 | 0 | 0 | 0 | 0 | 11 | 25 |

CALENDAR YEARS 1975-1984 SEMI-ANNUAL DEMAND BY ISSUE GROUP AND ADVICE CODE FOR NIIN:00-117-3746

LRC:X2300

NOMENCLATURE:AS-2283/SRN-12

**********NON-CASREPT DEMAND**********

1980

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5X | 0 | 0 | 1 | 2 | 0 | 1 | 0 | 0 | 4 |
| 5G | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 5 |
| 5S | 2 | 1 | 2 | 1 | 0 | 2 | 0 | 0 | 8 |
| 5D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NO ADV | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| OTHER | 1 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 5 |
| TOTAL | 3 | 1 | 5 | 10 | 1 | 4 | 0 | 0 | 24 |

1981

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5X | 0 | 0 | 2 | 1 | 1 | 2 | 0 | 0 | 6 |
| 5G | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 |
| 5S | 0 | 0 | 4 | 4 | 1 | 0 | 0 | 0 | 9 |
| 5D | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 2 |
| NO ADV | 0 | 0 | 2 | 1 | 0 | 0 | 0 | 0 | 3 |
| OTHER | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| TOTAL | 0 | 1 | 10 | 8 | 2 | 2 | 0 | 0 | 23 |

1982

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5X | 0 | 0 | 1 | 4 | 1 | 0 | 0 | 0 | 6 |
| 5G | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5S | 2 | 2 | 4 | 3 | 1 | 0 | 0 | 0 | 12 |
| 5D | 0 | 0 | 2 | 10 | 0 | 5 | 0 | 0 | 18 |
| NO ADV | 0 | 1 | 2 | 4 | 0 | 0 | 0 | 0 | 7 |
| OTHER | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| TOTAL | 2 | 3 | 9 | 23 | 2 | 7 | 0 | 0 | 46 |

1983

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5X | 0 | 0 | 3 | 1 | 3 | 1 | 0 | 0 | 8 |
| 5G | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 5S | 0 | 1 | 4 | 5 | 0 | 0 | 0 | 0 | 10 |
| 5D | 0 | 0 | 10 | 7 | 3 | 0 | 0 | 0 | 20 |
| NO ADV | 1 | 1 | 6 | 3 | 4 | 0 | 0 | 0 | 15 |
| OTHER | 1 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 5 |
| TOTAL | 2 | 5 | 23 | 17 | 11 | 1 | 0 | 0 | 59 |

1984

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5X | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5G | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5S | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 3 |
| 5D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NO ADV | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 2 |
| OTHER | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 1 | 0 | 4 | 0 | 1 | 0 | 0 | 0 | 6 |

**********CASREPT DEMAND**********

1980

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL | YEAR TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 |
| 5G | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 |
| 5S | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 10 |
| 5D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NO ADV | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| OTHER | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 |
| TOTAL | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 4 | 28 |

1981

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL | YEAR TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 |
| 5G | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| 5S | 2 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 15 |
| 5D | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| NO ADV | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| OTHER | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 |
| TOTAL | 3 | 3 | 2 | 1 | 0 | 0 | 0 | 0 | 9 | 32 |

1982

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL | YEAR TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5X | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 7 |
| 5G | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 3 |
| 5S | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 14 |
| 5D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| NO ADV | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 11 |
| OTHER | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| TOTAL | 3 | 4 | 3 | 0 | 0 | 0 | 0 | 0 | 10 | 56 |

1983

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL | YEAR TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 |
| 5G | 1 | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 5 | 6 |
| 5S | 0 | 0 | 2 | 3 | 0 | 0 | 0 | 0 | 5 | 15 |
| 5D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 |
| NO ADV | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 17 |
| OTHER | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 7 |
| TOTAL | 2 | 5 | 2 | 5 | 0 | 0 | 0 | 0 | 14 | 73 |

1984

| ADVICE CODE | PRI(1-3) | | PRI(4-8) | | PRI(9-15) | | (NO PRI) | | TOTAL | YEAR TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|
| 5A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 5G | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5S | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 5 |
| 5D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| NO ADV | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 3 |
| OTHER | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| TOTAL | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 4 | 10 |

# APPENDIX I

| WUC: | NAME | YEAR | TOTAL EQPN'S | UNPLANNED REQUIREMENTS: NON-CASREPTS I | II | III | NON | CASREPTS I | II | III | NON | TOTAL UNPLANNED REQ. I | II | III | NON | TOTAL REQMTS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00-116-5808 | AR-1159/SPN-41 | 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1976 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 4 |
| | | 1977 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| | | 1978 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| | | 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00-116-5850 | TG-203/SPN-41 | 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1980 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| | | 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1983 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1984 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 00-116-5852 | TG-202/SPN-41 | 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1981 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1982 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1983 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 |
| | | 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 00-117-3746 | AS-2283/SRN-12 | 1975 | 1 | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 2 | 0 | 0 | 5 |
| | | 1976 | 1 | 2 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 2 | 3 | 1 | 0 | 7 |
| | | 1977 | 0 | 0 | 4 | 1 | 0 | 1 | 2 | 0 | 0 | 1 | 6 | 1 | 0 | 8 |
| | | 1978 | 0 | 6 | 14 | 2 | 0 | 1 | 2 | 0 | 0 | 7 | 16 | 2 | 0 | 25 |
| | | 1979 | 1 | 4 | 8 | 1 | 1 | 7 | 4 | 0 | 0 | 11 | 12 | 1 | 1 | 25 |
| | | 1980 | 0 | 4 | 12 | 6 | 0 | 2 | 2 | 0 | 0 | 6 | 14 | 6 | 0 | 26 |
| | | 1981 | 2 | 1 | 18 | 4 | 0 | 6 | 3 | 0 | 0 | 7 | 21 | 4 | 0 | 34 |
| | | 1982 | 2 | 5 | 32 | 9 | 0 | 7 | 3 | 0 | 0 | 12 | 35 | 9 | 0 | 58 |
| | | 1983 | 0 | 7 | 40 | 12 | 0 | 7 | 7 | 0 | 0 | 14 | 47 | 12 | 0 | 73 |
| | | 1984 | 0 | 1 | 4 | 1 | 0 | 3 | 1 | 0 | 0 | 4 | 5 | 1 | 0 | 10 |
| 00-123-3937 | AN/GRR-23 | 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1981 | 0 | 0 | 3 | 3 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 3 | 0 | 7 |
| | | 1982 | 0 | 2 | 3 | 1 | 0 | 1 | 0 | 0 | 0 | 3 | 3 | 1 | 0 | 7 |
| | | 1983 | 0 | 0 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 4 |
| | | 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| 00-123-3938 | AN/GRT-21 | 1975 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1976 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1977 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1978 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1979 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1980 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | | 1981 | 0 | 2 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 1 | 0 | 4 |
| | | 1982 | 0 | 3 | 5 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 2 | 0 | 10 |
| | | 1983 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 3 |
| | | 1984 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

APPENDIX J

FREQUENCY OF DEMAND SUMMARY STATISTICS BY ISSUE GROUPS

NUMBER OF TRANSACTIONS IN EACH ISSUE GROUP

| YEAR | TOTAL PRR'S | UNPLANNED REQUIREMENTS: NON-CASREPTS I | NON-CASREPTS II | NON-CASREPTS III | NON-CASREPTS NON | CASREPTS I | CASREPTS II | CASREPTS III | CASREPTS NON | TOTAL UNPLANNED I | TOTAL UNPLANNED II | TOTAL UNPLANNED III | TOTAL UNPLANNED REQ. NON | TOTAL | TOTAL REQUIS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1975 | 822 | 150 | 238 | 41 | 50 | 24 | 30 | 0 | 0 | 174 | 268 | 41 | 50 | 533 | 1355 |
| 1976 | 621 | 129 | 191 | 90 | 3 | 65 | 63 | 1 | 0 | 194 | 254 | 91 | 3 | 542 | 1163 |
| 1977 | 979 | 103 | 339 | 114 | 3 | 112 | 94 | 1 | 0 | 215 | 433 | 115 | 3 | 766 | 1745 |
| 1978 | 1180 | 199 | 468 | 128 | 5 | 134 | 136 | 0 | 0 | 333 | 604 | 128 | 5 | 1070 | 2250 |
| 1979 | 673 | 257 | 496 | 98 | 18 | 197 | 139 | 1 | 0 | 454 | 635 | 99 | 18 | 1206 | 1879 |
| 1980 | 793 | 372 | 591 | 139 | 9 | 205 | 171 | 0 | 0 | 577 | 762 | 139 | 9 | 1487 | 2280 |
| 1981 | 623 | 426 | 660 | 140 | 8 | 270 | 214 | 1 | 0 | 696 | 874 | 141 | 8 | 1719 | 2342 |
| 1982 | 716 | 351 | 633 | 133 | 25 | 269 | 93 | 2 | 1 | 620 | 726 | 135 | 26 | 1507 | 2223 |
| 1983 | 1153 | 333 | 745 | 223 | 29 | 324 | 87 | 0 | 1 | 657 | 832 | 223 | 30 | 1742 | 2895 |
| 1984 | 825 | 81 | 205 | 54 | 6 | 60 | 21 | 0 | 1 | 141 | 226 | 54 | 7 | 428 | 1253 |

PERCENTAGE OF TOTAL UPRS BY CASREPTS/NON-CASREPTS

| | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|---|---|---|---|---|
| NON-CASREPTS | 89.9 | 76.2 | 73.0 | 74.8 | 72.1 | 74.7 | 71.8 | 75.8 | 76.3 | 80.8 |
| CASREPTS | 10.1 | 23.8 | 27.0 | 25.2 | 27.9 | 25.3 | 28.2 | 24.2 | 23.7 | 19.2 |

PERCENTAGE OF TOTAL UPRS BY ISSUE GROUP

| | 1975 | 1976 | 1977 | 1978 | 1979 | 1980 | 1981 | 1982 | 1983 | 1984 |
|---|---|---|---|---|---|---|---|---|---|---|
| ISSUE GROUP I | 32.6 | 35.8 | 29.1 | 31.1 | 37.6 | 38.8 | 40.5 | 41.1 | 37.7 | 32.9 |
| ISSUE GROUP II | 50.3 | 46.9 | 56.5 | 56.4 | 52.7 | 51.2 | 50.8 | 48.2 | 47.8 | 52.8 |
| ISSUE GROUP III | 7.7 | 16.8 | 15.0 | 12.0 | 8.2 | 9.3 | 8.2 | 9.0 | 12.8 | 12.6 |
| REQ.W/NO PRI | 9.4 | 0.6 | 0.4 | 0.5 | 1.5 | 0.6 | 0.5 | 1.7 | 1.7 | 1.6 |

NUMBER OF STOCK NUMBERS IN CENILE FILE = 466

APPENDIX K

NATIONAL STOCK NUMBERS EXPERIENCING
ONE CARCASS LOSS

| NSN | NOMENCLATURE | POPULATION | PRICE |
|---|---|---|---|
| 5825-00-110-4171 | AS-2822/SRN-15 | 16 | 10,200 |
| 5820-00-115-1905 | O-1695/U | 294 | 41,000 |
| 5840-00-116-5808 | AB-1159/SPN-41 | 4 | 40,800 |
| 5820-00-123-3945 | AN/GRR-24(V)1 | 1230 | 612 |
| 6110-00-135-2804 | C-7595A/U | 99 | 944 |
| 5820-00-135-6836 | TB-15/BRA-8C | 2 | 6,620 |
| 5825-00-248-7475 | C-4787/SRA-34(V) | 187 | 20,000 |
| 5820-00-249-8957 | AN/GRC-171 | 35 | 8,137 |
| 6625-00-264-2249 | AN/UPM-137 | 269 | 18,360 |
| 5820-00-334-8403 | PP-3916A/UR | 10 | 8,000 |
| 5895-00-434-4876 | BZ-173A/UPA-59(V) | 339 | 350 |
| 5820-00-450-1666 | AN/URT-23(V) TYPE 5 | 301 | 25,000 |
| 5820-00-522-5529 | AN/BRA-7 | 8 | 30,000 |
| 5820-00-799-8340 | AN/URQ-9 | 160 | 2,580 |
| 5820-00-810-7952 | MD-777/FRT | 296 | 41,840 |
| 6625-00-884-2116 | AN/URQ-10 | 5 | 5,000 |
| 5820-00-908-6473 | T-827/URT | 1 | 8,000 |
| 5820-00-948-3409 | T-827B/URT | 1145 | 15,000 |
| 5820-00-993-6225 | C-3697/URC | 113 | 1,100 |
| 5820-01-013-5396 | C-9219A/USC | 0 | 2,040 |

| NSN | NOMENCLATURE | POPULATION | PRICE |
|---|---|---|---|
| 5820-01-014-0590 | SA-1711A/UR | 1355 | 800 |
| 5820-01-019-9158 | MD-905A/USC | 5 | 10,200 |
| 5895-01-031-1363 | AS-2894/BRA-34 | 2 | 40,000 |
| 5840-01-040-3084 | OT-33/SPN-41 | 0 | 150,000 |
| 5840-01-043-2193 | OT-32/SPN-41 | 0 | 150,000 |
| 5895-01-053-5288 | CU-937B/UR | 0 | 15,000 |
| 5915-01-063-7007 | F-1479/URC-93(V) | 60 | 7,000 |
| 6625-01-065-5385 | 14482-WJ-1204 | 0 | 23,800 |
| 5820-01-067-3140 | O-1695A/U | 178 | 41,000 |
| 5930-01-067-3586 | SA-1997/U | 662 | 2,000 |

APPENDIX L

NATIONAL STOCK NUMBERS EXPERIENCING
TWO OR MORE CARCASS LOSSES

| NSN | NOMENCLATURE | UNITS LOST | UNIT PRICE | INTALLED POP. |
|---|---|---|---|---|
| 5820-00-078-5527 | AN/BRA-7 | 2 | 30,000 | 0 |
| 5820-00-086-1215 | AN/UPM-137A | 6 | 40,000 | 636 |
| 5820-00-100-8003 | AN/URC-35(w/o) | 2 | 30,000 | 12 |
| 5840-00-110-5468 | MK-1336A/SPA | 2 | 500 | 393 |
| 5825-00-117-3746 | AS-2283/SRN-12 | 2 | 896 | 12 |
| 5820-00-134-0278 | AN/URT-23A(V) | 2 | 25,000 | 54 |
| 5820-00-134-5448 | AM-3924(P)URT | 2 | 20,400 | 624 |
| 5895-00-135-1539 | AN/UPX-27 | 2 | 17,000 | 654 |
| 5820-00-168-9369 | R-1051E/URR | 5 | 12,000 | 425 |
| 5820-00-168-9621 | T-827E/URT | 2 | 15,000 | 478 |
| 5820-00-177-2951 | R-1051D/URR | 2 | 15,000 | 867 |
| 5820-00-181-5921 | AN/URC-35B | 4 | 32,000 | 238 |
| 5820-00-279-3543 | AN/URT-23A(V) | 5 | 24,000 | 306 |
| 6625-00-385-1153 | AN/URQ-23 | 21 | 8,570 | 243 |
| 5985-00-407-5314 | AS-2537/SR | 5 | 2,500 | 39 |
| 5820-00-411-6145 | AN/URC-35A | 4 | 32,000 | 116 |
| 5985-00-431-8743 | AS-2537A/SR | 45 | 2,500 | 304 |
| 5895-00-434-4877 | ID-1844/UPA59(V) | 3 | 7,216 | 889 |
| 5820-00-476-6848 | TB-6/BRA-8 | 61 | 40,000 | 92 |
| 5985-00-738-6321 | TB-15/BRA-8C | 6 | 14,810 | 0 |

| NSN | NOMENCLATURE | UNITS LOST | UNIT PRICE | INTALLED POP. |
|---|---|---|---|---|
| 5820-00-893-1323 | MT-1029/VRC | 6 | 102 | 2,089 |
| 5820-00-933-6373 | AN/URQ-10A | 8 | 5,000 | 515 |
| 5820-00-945-2981 | PP-3916/UR | 14 | 7,000 | 938 |
| 5820-00-948-3408 | R-1051B/URR | 18 | 10,000 | 5,682 |
| 5820-00-964-9675 | R-1051/URR | 3 | 10,000 | 202 |
| 5820-01-014-8259 | J-3354/U | 17 | 175 | 688 |
| 5820-01-026-7843 | AN/WRC-1BXMTR | 3 | 35,000 | 154 |
| 7035-01-062-8578 | ID-1844A/UPA-59A | 2 | 1,500 | 207 |
| 5895-01-064-0093 | J-3584/U | 4 | 250 | 535 |
| 5940-01-064-0327 | J-3562/WR | 3 | 650 | 474 |

# APPENDIX M

2Z COG ITEMS

| NSN | NOMENCLATURE | 24 MONTHS DEMAND PAC | 24 MONTHS DEMAND LANT | CASREP DATA FLEETS 2ND | 6TH | 3RD | 7TH | UNIT PRICE |
|---|---|---|---|---|---|---|---|---|
| 6625-0-110-5052 | Radiac Set AN/POR-65 | 43 | 22 | | | 1-C2 | | $ 472.00 |
| 5825-00-117-3746 | Antenna AS-2283A/SRN-12 | 17 | 32 | 6-C2 | | 1-C2 | 1-C2 | $ 896.00 |
| 6665-00-139-5810 | Detector Radiac DT526PD | 1,360 | 5,524 | | | | | $ 33.00 |
| 6665-00-148-8054 | Radiac Meter IM181APD | 61 | 152 | | | | | $ 67.00 |
| 6625-00-385-1153 | Oscillator, Radio AN/URQ23 | 22 | 38 | 3-C2<br>1-C3 | | 2-C2 | 1-C2 | $ 8570.00 |
| 5985-00-407-5314 | Antenna AS2537SR | 16 | 40 | 1-C2 | 1-C2<br>1-C3 | | 2-C2 | $ 1290.00 |
| 5820-00-475-2815 | Transmitter Radio T1181/SPN41 | 18 | 19 | 9-C2 | 3-C2 | | | $76800.00 |
| 6665-00-526-8645 | Computer Indicator CP95APD | 15 | 10 | | | | | $ 436.00 |
| 6665-00-626-9738 | Radiacmeter IM107PD | 89 | 46 | | | | | $ 8.20 |
| 6665-00-705-6068 | Radiacmeter IM9FPD | 335 | 103 | | | | | $ 17.00 |
| 5820-00-893-1323 | Mounting MT1029VRC | 46 | 54 | | | | | $ 102.00 |
| 5820-00-945-2981 | Power Supply PP3916UR | 23 | 47 | 2-C2 | 1-C2 | | | $ 4200.00 |

. 2Z COG ITEMS
(Continued)

| NSN | NOMENCLATURE | 24 MONTH DEMAND PAC | 24 MONTH DEMAND LANT | CASREP DATA FLEETS 2ND | 6TH | 3RD | 7TH | UNIT PRICE |
|---|---|---|---|---|---|---|---|---|
| 5820-00-948-3408 | Radio Receiver | 112 | 57 | 2-C2 | | | | $ 1500.00 |
| 5820-01-014-8259 | Interface Unit SECU | 37 | 34 | 3-C2<br>1-C3 | 1-C3- | 2-C2 | 2-C2 | $ 180.00 |
| 5915-01-063-7007 | Filter, Band Pass F1479URC93V | 12 | 24 | 3-C2 | | 1-C2 | | $ 7000.00 |
| 6665-01-080-4418 | Radiac Set ANPDR27S | 36 | 29 | | | | | $ 300.00 |

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